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This review of recent literature in the mass media in adult education is based on the assumption that the literature reflects actual practices and trends. It explains the difficulties in arriving at definitions, outlines the general trends in the uses of the mass media, and examines individual media as well as their use in the various areas of adult education. References in the text comprise the bibliography consisting of 120 titles, most of which have abstracts appended to them. (author)

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THE MASS MEDIA IN ADULT EDUCATION: A REVIEW OF RECENT LITERATURE

JOHN OHLIGER

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ERIC CLEARINGHOUSE ON ADULT EDUCATION

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THE MASS MEDIA IN ADULT EDUCATION:
A REVIEW OF RECENT LITERATURE

by

John Ohliger
Assistant Professor of Adult Education
Ohio State University

ERIC CLEARINGHOUSE ON ADULT EDUCATION

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107 Roney Lane

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ABSTRACT

This review of recent literature in the mass media in adult education is based on the assumption that the literature reflects actual practices and trends. It explains the difficulties in arriving at definitions, outlines the general trends in the uses of the mass media, and examines individual media as well as their use in the various areas of adult education. References in the text comprise the the bibliography consisting of 120 titles, most of which have abstracts appended to them.

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PREFACE

On behalf of the many adult educators who will use this literature guide, we thank John Ohliger for the talent and many hours he has devoted to its preparation. From a great mass of documents on use of the mass media in adult education, assembled by the ERIC Clearinghouse on Adult Education, Dr. Ohliger has selected those he judges most useful and significant. His review is both an organized guide to this body of research and development and a commentary on the problems and trends in this field.

Many of the documents reviewed are available in regularly published sources and many may be purchased in inexpensive microfiche or hard copy reproductions from the ERIC Document Reproduction Service. Please read carefully the note on availability of documents which precedes the bibliography.

It was Robert Blakely who once observed that if we only used what we now know about best practice in adult education, our educational programs would be dramatically improved. What we know from decades of experience and an increasing amount of research in adult education is, unfortunately, too often locked up in books, journal articles, reports, and other ephemeral documents. These come at us in such disparate forms and from such a maddening array of sources, that most adult education practitioners, and even researchers, simply cannot find what is pertinent to their problems in the disorganized jumble of publications.

It is this problem which the Educational Resources Information Center (ERIC) of the Office of Education is attacking throughout the field of education. A network of 19 information analysis centers collects, abstracts and indexes educational literature for announcement in Research in Education, a monthly catalog of abstracts with instructions for ordering many of the documents in inexpensive microfiche or hard copy reproductions. Research in Education may be obtained from the Government Printing Office for $11.00 per year ($13.75, foreign).

The ERIC Clearinghouse on Adult Education (ERIC/AE), co-sponsored by ERIC and Syracuse University, works as part of the ERIC system with three objectives: (1) to acquire and process adult education documents for Research in Education; (2) to produce, often with the help of subject experts in the field, basic and current bibliographies, literature guides, reviews and other information analysis publications; and (3) to aid and encourage the development of information services in adult education agencies throughout the field.

Dr. Ohliger's review of the literature on the use of mass media is an example of the collaboration between subject experts in the field and ERIC/AE staff, which we hope can be extended to many other areas where similar reviews can bring the literature of adult education a step closer to help improve research and practice in the field.

Roger DeCrow, Director
ERIC Clearinghouse on Adult Education
107 Roney Lane
Syracuse, New York 13210

THE MASS MEDIA IN ADULT EDUCATION: A REVIEW OF RECENT LITERATURE

I. INTRODUCTION AND GENERAL TRENDS

This review of recent literature on the mass media in adult education makes a major assumption: the literature reflects actual practices and trends. How warranted is this assumption? Perhaps publications are more like the tip of an iceberg, revealing little about the actual shape and thrust. Two problems immediately present themselves: the paucity of material on the print media and the overwhelming attention to television. Print media are so pervasive in adult education that it is almost impossible to come to grips with them. In a recent book, Knowles quotes Bryson to the effect that the invention of printing "made what we now call adult education possible." (118:330) Of the 120 items reviewed here only 17 include some mention of print but 84 examine television.

The only way to handle these problems is to be aware of them. Perhaps it is more accurate to say the the extent of the literature reveals the current interests and concerns of adult educators. The actual content of the literature examines the nature of problems and the range of usage.

A. Definitions

Robert Blakely says "Definitions of adult education. . . are as multitudinous as the autumn leaves, yet none satisfies many persons engaged in it. . . . Adult education cannot be satisfactorily defined." (117:3-4) The same problem plagues those who attempt to define the relationship between the mass media and adult education. Take television, for example, the current heavyweight contender for the mass media saliency prize. Martin states flatly "Nobody knows what educational television is." (52:24) The Ford Foundation points out "There is much confusion as to what educational television really is." (2:1) Common agreement is lacking because there is no consensus as to what the educational process itself is. The continuous pursuit of a definition itself is more a sign of the newness of the approach than anything else. The constant need to explain what you are doing is symptomatic of an institution in the process of establishment.

Some educators have decided that it is fruitless to continue the quest. Breitenfeld writes, "I believe that we have involved ourselves with definitions of philosophic terms and delineation of intangibles to the point of the ridiculous. Defining the 'mass media' grows tiresome, except as it is used as an educational tool in a seminar. . . . As we continue to struggle with definitions, and to wander about the philosophic meadows, I believe we neglect the job to be done. . . . I hope we're not defining terms when the walls come tumbling down." (113 #4:2) But Rosen comments, "What is educational television? Perhaps this question seems less relevant than more basic issues regarding educational television, such as how to use it, who shall control it, and for what purposes. And yet, one cannot really answer these questions without a definition of the term 'educational television.' It is necessary, not as an exercise in pedantry, but because various educational interests--Departments of Education, universities, school boards, agencies of the Federal government--are involved in educational television and the administrative and legal processes of working out relationships and responsibilities among them require a degree of consensus. . . . Realizing the complexity of such definitions, educators, unlike administrators and legislators, usually steer clear of such rocky shoals." (62:87-88)

Definitions that have been attempted usually say too little or too much. The National University Extension Association defines it opaquely as "(1) any broadcast or closed-circuit television program which provides informational enrichment or peripheral enlightenment. (2) A generic term often applied to any television program related to some form of instruction." (76:11) The British Postmaster General after consultation with broadcasters came up with this official definition. "Educational television programs for adults are programs (other than school broadcasts) arranged in series and planned in consulation with appropriate educational bodies to help viewers towards a progressive mastery of some skill or body of knowledge." (48:1) But, aside from the questions of whether programs must be in series to be educational and must be planned "with appropriate educational bodies," this definition presumes education is only cognitive, leans more toward concepts of formal education, and is locked in with the idea of "program."

Despairing of precise definitions many have settled for making distinctions which attack some of the issues involved. The subclass instructional television (ITV) has been created. Breitenfeld says that ITV is "commonly confused with the more generic ETV. ITV is basically televised instruction, or the classroom format moved to a television studio with or without the usual group of students." (94:7) The Carnegie Commission on Educational Television accepts the definition of ITV "in the general context of formal education," and sets up another class--public television. "Public television," states the Commission, "includes all that is of human interest and importance which is not at the moment appropriate or available for support by advertising, and which is not arranged for formal instruction." (111:1) The problem is that such distinctions leave out much that is educational. Where, for instance, does informal education fit in?

Other more encompassing distinctions have been attempted. The British Standing Conference on Television Viewing sets up the classifications "educational" and "educative." According to the Conference, "We are guided by a concept of education which makes it clear that we are concerned not only with the development of skills but with personal growth in understanding and sensitivity; with enhancing the power of judgement, not with the diffusing of judgements; in short with the kind of education that enables men and women to enlarge and interpret their own experience. We describe the programs which set out to do this in a systematic way as 'educational.' Those which do so as a by-product of being 'interesting' or ' 'entertaining' we prefer to distinguish as 'educative'." (33:11) Zilk creates the distinction between "functional" and "intentional." "Functional programs have a wide, but not a deep action, while intentional programs are destined to a limited audience but one which has a deeper influence." (41:10) While such classification systems have much to offer, they are simply not "catchy" enough, and no one but their authors has adopted them.

In this paper we will accept in general whatever particular educators say the adult educational use of the mass media is. But we will place emphasis on those examples which are more rigorous and systematic within the conventional classification systems of the field. And we will try to get at the issues that make definition difficult.

B. Utilization

Again we will use television as the prime example with a few illustrations drawn from other media. The crucial question in examining the relationship of television to adult education is "Is television sufficient unto itself to provide a worthwhile educational experience or is it a necessary but not sufficient part of a broader process that includes other techniques for learning?" About the only adult educators who have found television sufficient by itself are those involved in foreign language training. Hickel cites a number of examples of the successful use of television alone in teaching foreign languages. (21:39-52) Though even he notes that there is "some attempt to correlate with the use of other media."

By and large the answer to the crucial question separates the masters of the broadcasting institutions from those in more avowed educational institutions. The

Ford Foundation, generally a spokesman for the broadcasting point of view, does conclude, "When their (radio and television) use is significant, it is in combination with other learning resources and experiences, such as monitors and discussion groups, special reading materials and exercises, and correspondence work. Television and radio are seldom effective *alone*." (2:118) But this statement smacks of lip service, because nowhere in its extensive proposals does the Foundation provide for combining radio or television with other educational experiences.

Another powerful voice, the Carnegie Commission on Educational Television, also pays obeisance to the idea of integration when speaking of instructional television. "The Commission believes. . .that the deficiencies in instructional television go far beyond matters of staff and equipment. It is of much greater consequence that instructional television has never been truly integrated into the educational process. Instructional television, like instructional radio and instructional motion pictures before it, lies outside the process, put to incidental use as ancillary material. . . . In short, the Commission believes that instructional television must be regarded as an element in the total educational process." (111:80-82) But when it comes to the sainted area of "public television," which presumably includes informal adult education, the Commission backs off. Johnson makes several trenchant comments on the Carnegie Commission recommendations. "What is our concept of education? (Johnson asks) Without quarreling over the value of the (Carnegie) proposal for a Public Television Corporation, for example, much of the discussion in the report of the Carnegie Commission seems to equate education. . .with the broadcasting of high quality programs. Do we accept the equation? If not, what additional educational services are necessary to transform a broadcast into an educational experience?" (103:50-51) In another paper Johnson notes, "What speaks loudly by its silence (in the Carnegie Report) is the absence of consideration for the problem of linkage in Public Television. . . . It is the (Carnegie) Report's locked-in response to existing patterns--despite its stirring words--that disquiets the adult educator, discourages the innovater, and saddens all who hope that the specialized services of an advanced technological society can somehow learn to function together." (102:10-12)

But if the Ford Foundation and the Carnegie Commission do not speak out effectively for integration, many other voices do. The British are considering a proposal for a "University of the Air" which would combine television, correspondence, listening groups, and residence education in degree granting programs. (12) And since 1956 the Chicago Public Schools have been offering credit courses for junior college students via television which are combined with correspondence, telephone conferences, and other educational techniques. (78) McCombs notes that many research studies conducted at Chicago and elsewhere have shown "some parts of the teaching process are best done other than by television, and television is more effective when this kind of supplement is provided for it." (107:127)

Hudson and Alter call for educational television to become part of "the community of education." (40:2) Dieuzide offers the hypothesis that "television is a means of stimulating innovation and initiative, but should be used in the framework of a wider effort." (39:39) Rovan says that "in adult education, television must be considered as one element of a whole including various media." (56:3) And Knowles claims "Where the newer media have been used as the primary or exclusive instruments of learning, as in the case of 'telecourses,' or courses by film, their impact has been disappointing. . . . By far the most creative use of the newer media has been in combination with other media in integrated educational programs in which each medium reinforces the others." (118:341-342) A book sponsored by the U. S. Office of Education states "Experience indicates that the most effective uses of television have been in situations where it has been combined with other activities in a total learning situation." (60:5)

Over the years UNESCO has devoted a great deal of attention to the need for integration. One UNESCO publication gives the reasons for that need. "The broadcast media lack the spontaneous interaction of teacher and student; they lack the permanency of the printed work; they tend towards centralization and do not adapt themselves easily to local conditions and preoccupations; they require a technical infrastructure and suitable maintenance. These and other limitations underline the importance of combining their use with other media of communication, and underpinning them with an organizational and maintenance structure." (6:14) Rene Maheu, the Director-General of UNESCO writes, "New educational techniques and methods, however useful in themselves, can hardly be expected to produce desirable results if used alone, since no single teaching tool can serve all purposes. The methods, teaching aids, media and techniques work best to help the educator and student if they are planned to form an integrated whole. Educational radio, television, films or programmed instruction cannot by themselves solve all educational tasks. . . . The effectiveness of the new techniques depends to a large extent on the manner in which they are organized as an integral part of the over-all educational effort and on the way in which reception and utilization are controlled, guided and organized." (109:7-8) On the basis of twenty-three case studies in seventeen countries, Schramm and others conclude in a UNESCO study that "one of the reasons why a high degree of integration is so important is that the effectiveness of the new media is coming more and more to be seen as dependent upon the amount of learning activity that goes on at the receiving end. . . . It is not productive to think of the media as pouring content into viewers and listeners; a better way is to think of them as _stimulating learning activity_ on the part of their viewers and listeners. . . . The point is that, except in the rarest of instances, the new media cannot be counted on to do an adequate educational job by themselves, and hardly anywhere in the world are they being asked to do this. Planned guidance for pupils, practice opportunities, and the opportunity for two-way communication if possible, must be built into the teaching system of which the media are a part." (109:96) And Groombridge, writing in yet another UNESCO publication, decides on the basis of studies in Canada, Czechoslovakia, and Japan: "Perhaps the most important conclusion to draw from the three accounts in this study is that television is educationally most valuable when it is employed as a member of a teaching team, and least valuable when it has to sustain the entire educational relationship with the viewer. It needs to be thought about much more in terms drawn from education and less as a form of broadcasting. . . . The point has been made by Edwin G. Cohen, on the basis of experience at the Educational Television and Radio Center: 'For education by television to succeed. . .it is important that the actual program be _reinforced by other educational experiences_'." (115:135-136)

1. The Institutional Obstacle

The most serious obstacle to integrated utilization lies in the fact that different institutions control the various elements which must be combined. Johnson points out, "The ingredients of a comprehensive, multimedia educational program for adults are usually controlled by separate agencies. . . . The task of relating these different media in a learning system is a formidable one as most community education organizers have learned." (114:7-8) Schramm and others note that even in countries where all elements are under the aegis of the federal government, there can be problems. "In many countries. . . the facilities are owned by the ministry of communication, and their use for schools is under the ministry of education; if they compete rather than cooperate, the program will inevitably suffer." (109:95)

Why is it difficult for institutions to work together? Power concludes, "When you have two agencies cooperating--educational institutions and the mass media--in a common endeavor, the project itself is not always of sufficient concern to either party for them to be able to sustain the idea for very long. Each has a fear of the other party determining its objectives." (119:78) Hudson and Alter state, "As in other areas of education, parochialism sometimes inhibits full and free interaction. Some educational broadcasters do not fully trust the educators in their area, just as some educators still regard educational television as an upstart movement, lacking true substance. Some people at both sides of the spectrum deplore this state of affairs--where it exists--while others actually wish to preserve it for narrow personal reasons." (40:2-3)

The fact that many times different agencies have worked together for common purposes, as will be noted in detail below, is the best proof that it can be done. Cassirer of UNESCO offers this ray of hope and this challenge. "Adult education, which traditionally is concerned with people rather than production, has a particular contribution to make where the producers feel generally lost, ignorant and isolated. Theirs is a world of output, while the educator seeks to conceive the totality of man in society. To make television a tool not of the producer but of man, to permit active participation of the viewer in the exploration and utilization of the medium of communication, remains peculiarly the challenge of the adult educator." (29:2)

2. Listening Groups

When integrative utilization is attempted two educational techniques are most frequently adopted. These are face-to-face discussion in small groups--listening groups, and correspondence work. The literature on listening groups is extensive. Ohliger has prepared a lengthy historical dissertation on their use in over 30 countries which contains a bibliography of over 800 items. (25:261-291) This dissertation has been condensed into a monograph published by the Center for the Study of Liberal Education for Adults. (119) Other recent works include publications by Miller (23), Sim (24), Inquai (43), and the Farm Forum Project Committee (79). Of the many UNESCO publications on the subject (see 25 for a list), the most recent is a case study on the Radio Rural Forum in India by Schramm in a three volume series called New Educational Media (106). Schramm presents a tough-minded and realistic evaluation of the impact of discussion and of the costs of operation. Like other researchers Schramm emphasizes the importance of an "adequate organizational and supervisory staff" to get the groups started and maintain them. (106:132)

Japan is a good example of a country which recognizes the need for an extensive organizational structure to maintain the groups. The Japanese television system, NHK, started what it called "The Women's Class" in 1959. There are now 20,000 groups enrolling some 2,000,000 women. The groups watch and then discuss television programs dealing with various problems in politics, economics, and social affairs. To indicate the importance of organization in this successful program, Hatano reports "Within the service area of each transmitting station, NHK appoints a Women's Class consultant to look after the local groups. Each station also has several helpers who play a central role in organizing the women's groups. They encourage the formation of new groups or visit existing groups to offer advice and help in their operation.

They are not staff members of NHK but voluntary workers." (115:100) In Denmark the organization of groups is encouraged by the paying of a subsidy to "study-circles" utilizing radio or television. (42:14-16) An example of a project that did not succeed in organizing listening groups because it did not heed the lesson of other projects is the Chicago TV Junior College. Administrators saw the need to integrate face-to-face discussion groups into the television courses offered, but their only response was to provide enrolled students with names, addresses, and phone numbers of other students. Naturally, there is "little evidence of the formation of active discussion groups." (78 (1958) :11)

It is also important to train lay leaders of the groups when possible. Belgium has organized an extensive training course for the leaders of its "tele-clubs". (27:19) In Togo, reports Kahnert, "Club leaders are required to attend a training program lasting two to three days. Leaders of existing clubs are invited to attend the training sessions for leaders of new clubs. This has the double advantage of providing the old leaders with a refresher course and of allowing them to give both the new leaders and Radio Togo personnel the benefit of their experience." (107:213) Another African country, Niger, provides leaders with two weeks training and gives them a competitive examination at the end of it. Radio Niger is also responsible for another innovation: some leaders are provided with tape recorders with which to record the reactions of their groups. These reactions then become part of subsequent broadcasts to the groups, thus increasing the dialogue. (108:65-66)

In his research, Ohliger finds that listening groups are particularly effective with sections of the population of lower educational and economic attainment than are typically attracted to adult education offerings. (116:248) Recent literature provides a number of examples of this principle. Radio Togo had 152 largely illiterate groups discussing rural economy, public health, civics, and social affairs early in 1966. Plans called for 1000 such groups by the end of 1966. (107:212) In Niger there were 42 illiterate groups discussing public affairs radio programs with a ceiling of 70 groups expected in 1968. (107:61-62) Zambia has plans "to run a number of radio courses, backed where possible by listening groups." (90:47) An elaborate six year project under UNESCO auspices is being conducted in Senegal with television programs on hygiene and illness beamed to 500 women in ten groups, over three quarters illiterate. The dropout rate from the groups is only ten percent and there is impressive evidence to indicate significant amounts of knowledge gained and health practices improved. The preliminary UNESCO report has these comments. "The audience apparently acquires knowledge, not by mechanical conditioning but by a dialectical process: certain parts of educational television programs are assimilated, some are further discussed and some are rejected. The discussions which follow the programs are of decisive importance. It is during these discussions that the activating and stimulating functions of educational television which take them beyond the actual subjects taught become apparent, and brings underlying social problems to the surface. . . . Many women said that their home habits had changed as a result of their television experiences, and that they were now much more careful about the cleanliness of their houses and their children. . . . Adult education by television cannot be treated as a matter of mechanical cause and effect. More likely what occurs is that the capacity for self-expression and the increased activity employed by the women themselves in a continuous give-and-take with others in various social groups, ultimately produce a whole series of end-results." (8:9-34)

In Europe, 80 "tele-clubs" were organized around existing groups in Yugoslavia. (38:21) The Polish government finances many film and television clubs which discuss the programs. (50:14-15) Germany has organized at least 70 groups in conjunction with the televised "People's Universities." (31:15-16 & 28:21) Hungarian television uses listening groups in cultural centers to improve agriculture. (49:5-8) In England groups were organized to discuss a series of television programs on epidemics, during outbreaks of smallpox and poliomyelitis. The British Standing Conference on Television Viewing comments "The discussions seem to have contributed usefully to the fight." (45:56)

In the United States, in addition to many public affairs discussion groups utilizing television, (106:26-34) there are other examples. The North Carolina Department of Public Instruction has arranged a special television discussion course in conjunction with agricultural extension on the use of fertilizer and lime. (69) In Cleveland, Ohio the school system "is now engaged in producing special television programs directed to parents gathered in viewing centers in the inner city." (113 #3:6) Most recently both the Adult Education Association and the National Association for Public School Adult Education at their 1967 conventions passed a resolution calling on the new Public Broadcasting Corporation to "give major attention to the public educational utilization aspect of public broadcasting via such techniques as viewing (listening) groups." The resolution also called upon the new corporation to "provide necessary staff and financing to make educational utilization by citizens possible." (113 #1:2)

After a UNESCO study of broadcast education in three countries, Groombridge gives this summation of the impact of listening groups. "By combining television and group viewing, it is possible to exploit the capacity of the medium to stimulate large numbers of people (at a low per capita cost), by presenting to them national and international experts, and materials using all the film and studio resources, and to combine that capacity for stimulus with the dynamic influence of the small group. . . . There can be little doubt that the effectiveness of the programs was reinforced, in some ways actually released, by the way in which they were viewed and then discussed." (115:137-138)

3. Correspondence Study

Next to the listening group, combination of mass media with correspondence study is most popular. Schramm gives these reasons. "The combination of broadcasts and correspondence study is clearly an effective one--more effective than either of the components alone, because broadcasting can supply the personal note, the motivation, and the time schedule which are most difficult to handle by correspondence, and correspondence can supply the two-way communication between student and teacher which broadcasting lacks. Broadcast-correspondence education is also apparently an economical way of teaching. . . . Moreover, it seems able to rescue students for further education and higher training, when without it such students would be lost to education, and education to them." (106:161) According to Wedemeyer and Childs an impressive study of the combination's value was conducted at the University of Oklahoma. "Thurman White and Chester Williams. . .who devised the White-Williams Rating Scale, recently used the scale to analyze the effectiveness of correspondence study and audio-visual techniques, separately and together, in teaching. The scale lists ten basic criteria of good teaching and rates the methods analyzed on a four point scale. The total number of points possible on the scale (for a perfect rating on all ten criteria) is 40. Correspondence study rated separately by White and Williams garners 25 points; audio-visual teaching rated separately garners 23 points. Combined, however, the two methods achieve a rating of 33." (85:52-53)

But despite its value there is evidence that the use of television with correspondence is declining in the United States. In 1956 the Radio-Television Committee of the Correspondence Study Division of the National University Extension Association surveyed its member institutions. Seventeen university correspondence study departments reported that they were carrying on experimentation in televised instruction. (85:42) A similar study conducted by the NUEA in 1966, ten years later, indicated that only ten universities were combining television with correspondence. (87) Wedemeyer and Childs offer this explanation for the university's reluctance to use the approach. "The group of professional television educators that had come into being to develop and operate educational-instructional-television tended to see television as an instructional method. Correspondence educators, however, tended to regard television as a means of enriching correspondence instruction. The television specialist, in brief, regarded his medium as a 'mass' medium. He was concerned with the production of courses or instructional programs which would reach the largest number of students and which would minimize adaptation to individual needs and follow-up. Response communication from students was at a minimum, often only a final examination. The correspondence educator, on the other hand, saw television in the same category as any other visual aid. He, too, was interested in reaching the largest number of students, but he regarded each as an individual, and, consistent with the traditions of correspondence study, planned to follow-up carefully, adapt materials as needed, require full two-way communication, and maintain academic standards at least comparable to those currently maintained in class and correspondence activities." (85:42-43)

There are, however, a number of examples of the combined use of mass media and correspondence in the United States which it is fruitful to examine further. The Chicago TV Junior College includes correspondence work in its credit offerings. (78) From September 1956 until the end of 1965 almost 100,000 individuals registered at the TV College, accounting for over 145,000 course registrations. (107:101) The International Correspondence Schools in Philadelphia plan to include FM multiplex radio as part of a broader educational program through which to reach students for a number of courses. (103:8-9) The Articulated Instructional Media (AIM) project of the

University of Wisconsin Extension uses radio, tapes, slides, and telephones in its home study courses. (103:43) Also in Wisconsin, Wedemeyer and Childs report "The pacing and motivating effects of telefilms used with correspondence study were clearly identified in the Wisconsin Physics Film Evaluation Project (1957-1959). . . . While correspondence students who used the films did not achieve quite as highly as regular correspondence students, the difference in achievement between the two groups was slight. Students who used the films, however, showed a higher completion rate, completed more rapidly, made fewer errors in assignments, and required less of the correspondence instructor's time in commenting on and evaluating assignments." (85:46-47) Correspondence courses have been developed to go along with "Continental Classroom" broadcast over NBC. (85:43) Kansas State University has combined radio and correspondence successfully in a course called "The Appreciation of Music." (85:46) Finally, in the United States, in 1959-1960 a course in Audio-Visual Education was offered as in-service training for teachers combining television and correspondence. The course was offered in six states with the cooperation of ten universities. Wedemeyer and Childs comment "A number of teachers disenrolled after the course began because they objected to doing anything but viewing the television lessons. This reaction is probably an example of the expectancy of passivity that television teaching sometimes evokes in students. . . . It may also be an unintended but nevertheless critical evaluation of much of the teachers' previously experienced television instruction which did not challenge the teachers with rigorous program learning experience." (85:47-48)

There appears to be greater interest in combining correspondence with the mass media in other countries of the world. Japan provides the most striking example. Since 1951 the Japanese broadcasting system, NHK, has been offering broadcasts to accompany high school correspondence work. By 1963 a majority of the subjects in the high school curriculum were covered by broadcasts; the same subjects, usually with the same teachers, were broadcast on both radio and television. Six additional courses were added in 1965, and eight additional subjects are to be added to meet the requirements set by the Ministry of Education. In 1965 over 13,000 students were enrolled with more than fifty percent of them factory workers. (106:137-140) Schramm and others note "Japanese officials say that they regard the combination of broadcasts with correspondence study as a very powerful one. The broadcasts help to motivate the students, make regular their work habits, explain difficult points to them, and give them a flavor of classroom education they would otherwise miss. . . . Unlike most instructional television throughout the world, these broadcasts are considered not as supplementary but as essential to the course: the correspondence students in effect attend class by listening to or viewing the NHK programs." (109:46 & 106:139)

Use of the combination is growing in Africa. In Nairobi, Kenya, the Extra-Mural Department of the University College offered a course in Economics in 1965 integrating television and correspondence. One-hundred and sixty adults registered. Kenya now has plans for teacher training via correspondence linked with radio and television. (86:60-63) In Uganda the Extra-Mural Department of Makerere University presented a course by correspondence and television on the subject of "Good Letter Writing." A survey showed that those correspondence students who watched the television programs achieved better results than those who did not. (86:109) Edstroem in a study of African education commissioned by the Dag Hammarskjoeld Foundation concludes "The realities of the (African) situation call for a method of mass education that is relatively effective and economical in terms of manpower and finance. One of the very few feasible answers to this is a system of correspondence instruction supplemented with radio broadcasts, group study, residential courses, itinerant tutors and other face-to-face teaching facilities when and where possible. . . . Correspondence education, linked with radio broadcasts and face-to-face teaching to the extent and in the way conditions allow, is therefore nothing of only peripheral interest to modern Africa. As one of the very few vehicles of economical, effective mass education, and one which has already proved its value in many parts of the world for the past half-century or more, it should have a vital role to play in African education." (86:17,43)

In 1965 in England a combination of correspondence and television was utilized for a course in statistics. (11) In the same year a combined course was offered in Economics. (18) Late in 1965 and early in 1966 a combined course was presented for voluntary and professional social workers. (14) Correspondence also figures in the British proposal for a "University of the Air." (12) In Holland a correspondence course in basic language used television for feedback purposes. (21:36-38) In Argentina 4,500 adults enrolled in fashion and electrician courses combining television with correspondence. (53:8) In Manitoba, Canada, a television course combined with correspondence was given in farm accounting. Siemens concludes on the basis of a research study that a significant difference was shown in knowledge gained and adoption of practices between those who were actively involved in the correspondence portion and those who just viewed the television programs. (68:26-27)

What is the future direction of the combination of correspondence with the mass media? Wedemeyer and Childs look at it this way. "Suppose we are convinced that the great power of television is to motivate the student, explicate the content, and pace the learning. (To 'pace' learning is to set a standard rate for completing learning experiences. In regular correspondence study, the student paces himself since he is encouraged to go at his own rate. When television, radio or teacher-visitation becomes a part of correspondence learning, the instruction as in a class is 'paced.') In designing a correspondence course to be combined with television, we might then decide that the television medium will be used only for those purposes. . .to motivate student interest, to motivate student activities (reading, writing, reporting, discussing, evaluating, criticizing, comparing, selecting, judging, solving problems, understanding, etc.). . . . Much experimentation and research is still needed in the search for the most effective way of combining the mass media with the individualized, tutorial methods of correspondence study. The possibilities are so great, however, and the need throughout American education is so pressing, that there is clearly an obligation for television, radio and audio-visual s specialists in education to join as quickly as possible the correspondence educators to hammer out new techniques.

Proposals, such as those made by a joint report of the Correspondence Study and Audio-Visual Divisions of the National University Extension Association, for the broad testing of correspondence study combined with television, should receive support. Funds should also be provided for research and experimentation in the use of radio and films." (85:51-53)

4. The Systems Approach

The ultimate in the integration of the mass media with education occurs when what is called "the systems approach" is applied. The National University Extension Association defines the approach this way. "An integrated, programmed complex of instructional media, machinery, and personnel whose components are structured as a single unit with a schedule of time and sequential phasing. Its purpose is to ensure that the components of the organic whole will be available with the proper characteristics at the proper time to contribute to the whole system, and in so doing fulfill the goals which have been established." (76:13) Schramm and others provide this elaboration. "Essentially the systems approach involves viewing any productive system as a whole in order to examine how its productive process function in relation to its resource 'inputs' and its intended 'outputs'. . . . The hallmark of this approach is that it views any particular way of solving a problem, or pursuing an objective or of getting certain work done, as a coherent 'system', in the same sense that an engineer uses the term. It perceives a system not as a static structure but as a dynamic, well-organized and integrated process, having four main features: objectives, inputs, process (methods), and outputs." (109:162-164)

Johnson qualifies the approach and provides an example from his experience with the Metroplex project in St. Louis which combined television with listening groups and the use of printed materials. "Not technology but the integration of educational materials, each with a carefully defined role, is the core of the systems approach. . Most programs that appear to achieve this integration are actually assemblings of independently operated programs revolving around a central theme and carried on in loose coordination within a given time span. They are valuable indeed and the whole is somewhat greater than the sum of its parts. But they are a far cry from a learning system in operation in the community. . . . The feature that made the Metroplex Assembly operation unique was the fact that the persons responsible for developing the different parts of the total program met together to agree on program objectives, underlying concepts, main issues to be raised, and value conflicts in existence in the community. Each feature of the total program was so carefully related to each other part that no one part duplicated the function of another, yet all were in harmony insofar as the objectives of the program were concerned. I do not know of any other television program whose producer has gone through this kind of combined operation before turning to his unique responsibilities. It is difficult to apply the learning system approach to the informal education of large numbers of adults. . .yet, until we learn to do so, this writer remains convinced that we shall not make the massive impact which is essential to any real shift in public attitudes or thinking. Only when the whole of a community--indeed, the whole of an organized society--is seen as the client and informal educational programs for adults respond to that concept, will education begin to make its full contribution to the shaping of an informed and rational public opinion. Only then will television realize its full educational potential." (114:7-9)

Other possible examples of the application of the "systems approach" have occurred in England. Wiltshire and Bayliss provide a complete description of how television, listening groups, correspondence, and print media were combined in the offering of a course on Economics. (18) Also Hancock and Robinson present an extensive discussion of the same combination of elements in a course for social workers. (14) And the British proposal for a "University of the Air" that would integrate television, correspondence, listening groups, and residence education, may be yet another example. (12)

C. The Dangers of Technology

A minor theme that pervades the literature is the consideration of the possibility that there are real dangers in technology--specifically arising from some of the new media of communication. When combined in learning situations some feel the effect could be quite frightening. Rovan states flatly "Television is capable of becoming a social sickness. . . . Too large a dose of television can kill." (26:4-5) However, in another article Rovan does qualify this point of view slightly. "It is not television which creates a passive attitude, but bad television encourages this attitude in a sick society. . . . Every society has the television it deserves, but television deserves a better kind of society." (54:6) Palmeri sees this hideous possibility. "If, in fact, a so-called painless way of learning were to prevail, it could not be assumed that twenty-five years from now people would know how to read (as we understand the term). Indeed, if science and technology were to advance much more in this field, there would be the distinct possibility of creating a mentality which would demand answers to specific questions by merely dialing certain letters on certain machines--a process of 'learning', which has absolutely nothing to do with education." (85:50)

The problem with most attacks on technology is that they never get very specific about the exact character of the danger. Halloran, however, states that it is a function of the level of education of the viewer. He writes "The lower the level of education of the viewers, the easier they let themselves be influenced by mass media." (80:39) The answer, of course, is to raise the level of the viewers' education. The originators of the Chicago TV Junior College were concerned that television adds "an inordinate measure of credibility and authority to the teacher's statements in some situations." (78 (1958): 3-4) They therefore took the precaution of getting television teachers to carefully distinguish between opinion and verifiable fact in their presentations.

Some writers, while aware of the problem, take a more sanguine point of view. Knowles writes "Unquestionably the newer media of mass communications have had a tremendous influence on the continuing learning of adults, although their specific effects are difficult to prove or measure by research. No doubt some of these effects have been positive and some have been negative, as evaluated by adult educators and social philosophers. But the net effect seems to be in the direction of producing an environment more conducive to continuing learning." (118:334-335) And a book called Educational Television: The Next Ten Years contains this flat statement. "The standardization and conformity feared by some educators is no more a serious threat from television than it has been from the textbook." (60:20) Finally, Meierhenry believes that the opposition to television--because it does not provide feedback, discussion, or participation--is based on a failure to use television properly, and not on faults inherent in the medium itself. In fact, it is his belief that the whole new movement toward personalization and humanization of teaching will be aided by television rather than harmed by it. (60:20)

The most realistic conclusion seems to be that, indeed, there are dangers in the new media. However, these very media are such powerful educational tools, that their dangers can be eliminated at the same time their powers are enhanced by combining them with other educational techniques such as the listening group and correspondence study which provide the necessary face-to-face or individualized situations.

D. Characteristics of Learners

Finally in this introductory section, another way of looking at the relationship of mass media to adult education is to examine it from the point of view of the potential learner. In 1966 a massive interview study of Patterns of Adult Information Seeking was completed by Parker and Paisley for the U. S. Department of Health, Education, and Welfare. Parker and Paisley conclude that mass media "can be considered as the most frequently used source of 'self-instruction' in our society (as compared with non-media adult education courses and interpersonal influences). More than two-thirds of the respondents were able to cite relevant content in newspapers, magazines, and on television, when asked what 'readily available and practical education' they thought was provided by each medium. Whether or not adult education administrators consider the mass media as educational channels, it is clear that their potential 'audience' is willing to view the media in that way. . . . Level of education is the single most powerful predictor of media use for information. The preceding discussions of individual media have shown that those sources commonly associated with information--newspapers, magazines, non-fiction and reference books, and libraries--are more frequently sought by adults with at least some exposure to college than by adults who terminated their formal education at high school graduation or earlier. . . . In addition, greater education implies more specific use of educational elements within media (e.g., documentary television programs." (1:167-170)

In regard to other specific characteristics of potential learners, the Parker and Paisley survey notes that women are about twice as likely as men to be interested in lessons on television. (1:35) This finding is confirmed in an earlier study by Winick that educational television viewing tends to be a feminine activity. (21:265) Winick also states that, in general, "it appears likely that attitudes toward educational television are essentially related to attitudes toward education on the one hand and toward the television medium on the other, rather than on a perception of the amalgam of the two." (20:266)

One more study is applicable here. In 1967 Howard conducted a series of interviews in one county to determine attitudes toward the home economics component of agricultural extension. Howard reports "Each woman interviewed was asked to select the media by which she preferred to receive information through the (home economics) extension program. 76.9% indicated that they preferred mass media, radio, television and the news column. 17% prefer individual contacts--home and office calls, telephone, personal and news letters. 6.1% were interested in specific and general meetings." (72:41) All these studies thus indicate that there is a massive audience available for adult education through the mass media.

II. THE MEDIA

A. General Mass Media

Very little of the literature treats the mass media as a whole or compares various media's adult educational effects. Everly is working on a dissertation examining all the mass media in relation to continuing education instruction. In a preliminary report Everly states "With 1,244 course offerings and 1,685,058 participants between January 1962 and July 1967, a beginning has been made in the use of mass media as a tool for continuing education instruction. These efforts involved at least 164 separate institutions in 44 states plus national and regional endeavors. Trends indicate a further growth potential with adequate staffing and financial resources. However, if something were to happen tomorrow to wipe out all continuing education instruction via the mass media the main institutions of continuing education would hardly know it were gone. . . . Mass media have made public what has prevailed relatively unnoticed in continuing education previously--mediocrity in teaching. This disdain for the mediocrity of much that appears today via the mass media should be directed at the educator who can control this quality, not directed toward his tool which has no control over what is fed through it as continuing education instruction. . . . The most common suggestion for improvement of present course offerings was to increase the involvement of participants. Other findings cited in the study support the view that the need for interaction varies according to the participant's identified goals. The more specific the goal and the more highly motivated the learner, the less the need for interaction." (113 #5: 2-3)

Miller reports a Canadian research study comparing the impact of live presentation, radio, television, and print media. "The basic design of the experiment consisted in the simultaneous presentation of the same lecture to four groups: a studio audience; a radio group, who heard it over a loudspeaker; a television group, who viewed a conventional set; a reading group, who had mimeographed copies of the lecture to read at their own pace, but only for the length of time it took to deliver the lecture. . . . Immediately after the lecture, each group wrote an objective multiple-choice examination on its content. The same questionnaire was administered eight months later. . . . (After both tests) the mean score of the television audience was significantly better than that of the radio group. The score of the radio group was in turn significantly better than that of the reading group. No significant differences were found between the reading and studio groups." (115:49)

Verner and Gubbels conducted an experiment exploring the adoption of innovations by dairy farm operators in a portion of Canada. They find that "at the awareness stage, the mass (media) sources were the most important and constituted about 55% of all the sources reported. This use of mass sources showed a sharp decline to the interest stage, followed by a gradual drop in use to the trial stage and no use of mass sources reported at the adoption stage.

This use pattern of mass sources is consistent with previous research." (89:32)

B. Television and Videotape

There is some discouraging evidence about educational impact of television. The Morse Communications Center at Brandeis University has been conducting surveys every two years on the variety of educational television programming. The latest survey indicates that programming for the college-adult instruction audience decreased between 1964 and 1966 from fourteen to nine percent. (22:47) An official position paper by the Adult Education Association of the U. S. A. notes that "a major shortcoming (in adult education) is the limited use which has been made of educational television." (112:10) This finding has been backed up by a national sample survey conducted by the National Opinion Research Center. The survey finds that "television has apparently failed to make much of an impact as a medium of adult instruction. Only 1.5% of all courses studied during (1961-1962) had been through television and only 290,000 adults were estimated to have followed an educational course on television during this time. From some points of view, this would represent a sizeable number of adult students, but it by no means came close to the 1,750,000 adults estimated to have taken correspondence courses over the same period of time. Indeed, when we evaluate the major home-study forms, television classes are still very much overshadowed by correspondence courses." (110:4) The Carnegie Commission believes that "with minor exceptions, the total disappearances of instructional television would leave the educational system fundamentally unchanged. Even the claims made for instructional television by its most passionate defenders are in their essence defeatist. It is maintained that students learn as well from television as by conventional means, or that television can educate more cheaply, Such statements scarcely intimate that there is a powerful new medium of communication capable of making its own impress upon the process of education." (111:80-81)

The Ford Foundation states that "non-commercial television plays a much more important role in other countries, such as Britain, Canada, Germany, Japan, and Sweden, that it does in the United States." (2:101) But even in other countries the picture may not be so rosy. The Director-General of UNESCO characterizes the educational use of television throughout the world as "marginal". (109:8) This is the picture in Canada according to the annual report for 1967 of the Canadian Association for Adult Education. "Except in Quebec, where both the universities and the provincial government are heavily engaged in educational television programming using private stations and the Canadian Broadcasting Corporation, activity in adult educational television has declined in recent years." (113 #5:8) Miller believes that "possibly the main difficulty in the development of educational television for adults in Canada is a generally negative attitude that prevails among educators." (115:50)

Why, generally, is television so little used for adult education? The greatest reason is probably because there are so many unresolved issues about television's character and potential usefulness. Groombridge believes that these are some of the important issues. "Which of the different purposes of adult education can successfully be realized in television programs and how should such programs be made available--on specialized educational channels or general channels? What are the best ways of using limited channels and limited time? For what kinds of audiences--large and undifferentiated, or small but specific? Under what conditions are viewers most successfully converted into students? In what ways should educational programs be coordinated with the educational system, and whose final responsibility should they be--the broadcaster's or the educationist's? What forms of collaboration between broadcasters and educationists maximize the value of programs for students? What are the obstacles to effective communication through television and what can be done to overcome them?" (115:15)

The fact that television is so heavily regarded as a medium for entertainment creates a problem in the minds of some authors. Johnstone and Rivera state, "it may be that television has come to be identified by the American public almost exclusively as a medium of light entertainment, and, if this is true, then it might also be that no matter how much instructional fare were made available on the medium, it would still be preferred for other purposes, and other sources would still be regarded as more appropriate for systematic learning." (110:55) On the other hand, Breitenfeld feels that adult educators should take advantage of the entertainment aspect of television. Breitenfeld writes, "Cooperation between educators and showmen is vital to the development of balanced educational programming policies. Unfortunately, educators often cling to a mysterious 'dignity' and the combination of entertainment with the transcendent aims of adult education is difficult to effect. . . . The possibilities are endless, and the results could be phenomenal, if the leaders in educational broadcasting realize that entertainment must be an important factor in most educational programs." (46:5) Yet, another adult educator, Alan Thomas, executive director of the Canadian Association for Adult Education, believes "The simple fact is that the logic of truly instructional television is opposed to the logic of entertainment television. Despite lots of brave attempts to combine them, they can't be combined on the same channel, and efforts to do so have declined in the face of frustration and contradiction. The entertainment pattern is to attract as many people as possible to the screen and keep them for as many consecutive hours or half-hours as possible. The result is a lessening of distinctive features, and the attempt to combine entertainment with edification, either in the same block of programs or within programs themselves. . . . The instructional pattern is the opposite. In this case, a specialized audience, drawn by a specialized interest, is selected and maximized, to the extent that less specialized interest in the area is actively discouraged from viewing. When the portion devoted to this interest is finished, this audience is chased away by the fact that for the next portion of time a totally unrelated specialization is introduced. It is easy to see that not only the practical problems of information, production, and presentation in the two cases are quite different, but that one pattern actively interferes with the other." (62:56)

The literature also reveals disagreement on how rigorous a television program must be to be considered "educational." For instance, Hudson and Alter state that "the word "educational' is used in its broadest meaning, and does not refer to instruction, but rather to the wide area of personal growth, enrichment, and enjoyment that is usually termed 'culture'." (40:1) However, Puglisi writes, "I do not consider so-called cultural programs as adult education programs, and consider the latter as of three kinds, namely: programs designed for specific social groups, to satisfy their special needs; educational programs which have an instructional purpose in the psychological, moral and social sense; and programs dealing with social and psychological problems." (58:44) Groombridge takes a more all-inclusive point of view when he claims that generally "television is. . .a profoundly educational medium. It socializes viewers, in the social psychologist's sense, and is often at its most influential when at its least self-conscious. If the values underlying the program output as a whole are philistine values, then this is of more social and educational consequence than any short segments of off-peak enlightenment. . . . When the creative qualities of intelligence, curiosity, wonder, or imagination are at work, then many programs in the general output will educate more effectively than a purpose-built educational series. . . . There is value in the claim that all television educates. But there are major differences between programs that happen to educate and programs deliberately intended and designed to do so. . . . It is natural for educators to want the best time for educational programs and they may suspect that advocates of the timings are irresponsible opportunists who care overmuch about audience size. On the other hand, when general channels are used, there is a matter of equity to be considered. Should preference be given to most viewers when most viewers are available to watch, or should it be given to that select minority who want to improve their mastery of the abacus? It is not a trivial question. Television has many social obligations to meet. Educational series located in designated educational channels will attract a self-selecting audience, strongly motivated and not requiring too much seductiveness in the presentation of programs. Series placed in the general output might arouse the curiosity of wider circles of viewers and tempt them into an educational experience." (115:12-13, 132)

There are some strong and hopeful voices in the wilderness. Both Miller and the National Association of Educational Broadcasters suggest many adult education uses of television in commenting on recent Ford Foundation proposals. (16:24 & 17:43) Thomas sounds this forceful note. "What could be done? There can be no doubt that instruction of a very high order can be carried out over television. With proper on- and off-air organization, teaching and learning can have access to the best resources for demonstration and elaboration imaginable, far greater than available in any classroom. What's more, experiments in England now indicate that on a large enough scale, that is, a scale made possible by television, instruction becomes cheaper than handling it in the conventional way. Television creates new student bodies and new learners in the way that the printed word did during and after the Renaissance. Not only that, it provides the key instrument for relating learning to community and social action, the context in which the great bulk of adult learning has always taken place. Experiments in urban problems, demonstrated in the United States some years ago, remain still as successful experiments, aching to be given regular encouragement and function." (62:59) And Wiltshire and Bayliss provide a powerful reason for adult educators to keep trying. "If television is to teach it must reach out beyond the screen and engage its viewers in some planned process of learning. . . . It is important that we should try to do this and keep on trying, for in our home-centered society the television set is for most people, one of their main windows on the world. Adult educators must learn to use it, not only because it enables us to speak to more people more quickly but also because it enables us to speak to people whom we should never reach by our normal methods of recruitment--people for whom 'me-looking-at-the-telly' is a normal and acceptable role, but 'me-a-student-in-a-class' is not." (18:5)

That offshoot of television, videotape, is just beginning to capture the attention of adult educators. Cunningham says that videotape can be "an extremely valuable tool." (105:332) He provides some simple suggestions for its use by adult educators. Stoller recommends its use in sensitivity training. (74) Payne believes that videotape "adds a new technique to the trainers' store of alternative devices from which he can draw in creating new learning designs but should not become the central theme around which all future designs must be created." (92:25)

C. Film

Probably the most worthwhile item in the recent literature for adult educators interested in using films is a work edited by Limbacher in 1967. Called Using Films, it presents a number of helpful chapters including one on the utilization of films for adult discussion groups. (61) A Foreign Policy Association pamphlet also contains a number of suggestions for film discussion purposes. (67)

There is relatively little comment in the current literature on the value of film for adult education. A UNESCO publication entitled Mass Media in Adult Education concludes that "film allows to a much greater extent than television intensive individual work with a group." (80:44) Ivancevich and Donnelly report on a study in which thirty training directors from small, medium and large size firms were asked to rate seven processes (lecture, conference, programmed instruction, role playing, sensitivity training, television, films) in terms of knowledge acquisition. Films tied with conference for second place. Ivancevich and Donelly state, "It can be seen that the training directors have a fairly realistic and accurate opinion about which training methods are most and least effective as far as knowledge acquisition is concerned." (93:666-667) Palmeri believes that film shares a basic weakness with television and radio which impairs their effectiveness as teaching media. Palmeri writes, "This weakness is really inherent in human beings and therefore cannot be overcome until science and technology succeed in changing us into robots. Learning is based on understanding. While reading, the best of us--no matter how well-intentioned, physically fit and mentally alert--very often fail to grasp the meaning of a passage here and there. It is sometimes necessary to read the same passage, the same chapter, several times to comprehend it. Because they cannot stop. . .movies. . . cannot replace the book or the study guide. . .for real learning." (85:50) Lyle notes a use of films in Algeria for in-service teacher training that attempts to overcome this weakness. A brief segment of the film is shown followed by discussion then the segment is repeated. (107:163)

Some of the literature examines the possibility of increasing the effectiveness of films by combining their use with other processes. Wedemeyer and Childs believe that films "may play a large part in invigorating correspondence study for both individuals and groups." (85:46) They call for more funds to conduct research into combining films with correspondence. (85:53) Koblewska-Wroblowa and Koniczek report on the combination of films with listening groups in Poland financed by the government. (50:14-15) Rovan notes the use of films in collaboration with tape recording, print media and television in Germany and France. (26:7-9) Whitted and others describe a completely automated multi-media self-study program for teaching electronic skills that brings together films with tape recordings, slides, programmed text and other print media. (98) Other examples in the literature of the combined use of films with other processes include those in a community action training program (88), military training (70), the training of hospital service personnel (113 #4:8), and public affairs. (113 #3:4)

D. Radio

Of the 120 publications surveyed for this review sixteen deal with radio in adult education. Somewhat over half of these items examine radio for adult education in the underdeveloped areas of Africa, Asia, and Latin America. Several of the publications on underdeveloped areas explore the use of listening groups in connection with radio. Schramm evaluates and describes the Radio Rural Forum in India. (106:132) Lefrance details the Radio Clubs in Niger. (108:43) Lefrance also explains the use of "radiovision" in Niger. (108:43) "Radiovision" is the combination of radio with film strips. Kahnert notes the utilization of listening groups in Togo for basic education purposes. (107:211) Schramm and others, after an evaluation of programs in all three of these countries, conclude; "On the basis of the Indian experience, and the somewhat different radio forums and clubs in Togo and Niger, we need have few worries about telling a developing country that a radio broadcast fed into a supervised forum group, with adequate arrangements for feedback from the forum to the source of the programs, is an effective way to carry development information into a community and encourage innovation. It would be well to warn a prospective user that such a forum will not run itself, that it needs a considerable amount of field support and cooperation from development agencies and programs, that the programs and topics need to be local in interest and focus. But given ability to operate it well, the radio rural forum apparently will work." (109:88-89) Tanzania has recently adopted listening groups toteach agricultural methods, foreign languages, and public affairs. (113 #2:7) Another example of the use of radio in underdeveloped areas is provided by the Radio Schools of Honduras--basic education programs for groups which are patterned after similar ones in Columbia. (108:97)

Several of the publications are devoted to pleas for more use of radio in underdeveloped areas. Edstroem calls for more application of radio to correspondence study in Africa (86:43); Brown announces plans for an increased radio adult education schedule in Zambia (90:47); Inquai calls for an extensive radio series combined with listening groups for community education in Ethiopia (43); Widstrand argues the need for much greater use of radio for adult education in Tanzania (9); and UNESCO reports on a meeting of experts who recommend a vast increase in adult education radio throughout Asia. (6:45)

Turning to radio in the more developed areas of the world, we find a number of comparative comments on radio and television. Groombridge claims that "even in countries where radio and television are spoken of as complementary their actual use tends to be rigid and separate." (115:134) Rowntree believes that radio is better suited to advanced courses in foreign languages than television because radio "offers the listener the two things he needs for the acceptance of a concept--words and silence--whereas television is bound to show something on the screen, if only a speaker's face." (19:62) Johnson, in describing the extensive adult education use of the telephone-in radio program in Canada, states that "the Canadians believe that radio is much better than television for this purpose. When one person--the moderator--can be seen and others not, it induces, they believe, an unfair advantage." (103:40) And Ohliger notes the continuing controversy that exists among proponents of the listening group approach about whether radio or television is better suited to it. (119:75-76)

In regard to the adult education use of radio in the United States, Wedemeyer and Childs conclude "Radio has perhaps never been fully exploited as a means of enriching regular instruction. This failure may be related to early efforts, in the 1930's particularly, to make radio a distinct teaching method. There is, in fact, a close parallel with educational television use here. Radio, too, tended to require separate budgets and technical staffs, removed from educators who otherwise carried out the extra-mural, off-campus instruction of universities. Where this separation occurred, the adequate exploration of radio teaching capabilities by educators may have been hampered." (85:45) One technological development which may improve the situation is FM multiplex which enables a station to serve several different audiences simultaneously over the same wave length by introducing sub-carriers. Johnson gives many examples of plans for FM multiplex adult education operation. He writes, "The range of audience for which planning is underway is varied and impressive. In Wisconsin, the focus is primarily on serving professional groups through the University's extensive communication center. In Tennessee, a library plans to combine television and multiplex radio to reach large numbers of disadvantaged with special programs to upgrade their skills. KUSD in South Dakota plans special services to farmers. In St. Louis, Missouri, KATZ (a commercial AM station) plans to introduce a non-profit educational FM station to program directly for large Negro audiences; multiplex looms large in their thinking. For example, KATZ hopes to beam programs to different housing projects scattered throughout the city." (103:9) And Adams describes the use of multiplex FM to train typists. (81)

E. Tape Recordings

Tapes are frequently used in combination with other media for adult education purposes. The Articulated Instructional Media (AIM) program of the University of Wisconsin Extension puts together tapes, radio, slides, and telephone calls to aid correspondence study. (103:43) RCA has developed a multi-media self-study course on transistors which includes tapes, slides, films, programmed texts and other print media. (98) The United States Army now provides a large portion of non-commissioned officers training through a course that brings together tape recorded lectures with slides and workbooks. (97) The National Association of Manufacturers has combined tapes with multiplex FM radio in an experiment with the training of typists. (81) Germany and France are integrating tapes with television, films, and print media. (26:9)

Another development is the loan or sale of tapes which were originally prepared for radio broadcasts. The Center for the Study of Democratic Institutions and Pacifica Radio, two nonprofit educational foundations, are now making tapes of their radio broadcasts available for adult discussion groups (113 #3:5 & 113 #4:6) In Australia the University of New South Wales Radio University sends out tapes of broadcasts along with sets of notes and diagrams to students who are beyond the range of the university's transmitters or who wish to undertake a course not scheduled for immediate broadcast. (106:196-197) Rowntree says that the "most promising development of all" in foreign language instruction may be the loan of tapes of radio broadcasts to organizations wanting to set up teacherless classes. (19:64)

Tapes are frequently used in foreign language programs for self-instruction purposes. Rocklyn describes 60 hour taped courses in Russian, Chinese, and Vietnamese now in successful use by the United States Armed Forces. (96) Lamerand writes that tapes "can be used to improve the pronounciation and vocabulary of students, to drill the grammatical features of the target language and so to lay the groundwork for exercises for listening comprehension, dialogue participation and adaptation, and various reading skills. . . . Where a language is not purely phonetic, tapes can be designed to teach how various sounds are represented in the written language." (63:42) Tapes are also recommended for use as an alternate for T-groups in management sensitivity training. (84)

Finally, Johnson notes two recent innovations in the adult education use of tapes--dial access libraries of tape recordings and tapes in automobiles. Johnson writes, "The dial access library, widely used in medicine and a few other fields, permits an appropriate person to dial a telephone number and then select from a list of tape recordings one that he wishes to hear. . . . Recorders have recently been mounted on automobiles of car rental agencies in Los Angeles to provide visitors with a self-guided tour of the city as well as simple directions for getting around. The Canadian Association for Adult Education is seeking to develop the same idea--recorders mounted in automobiles--for a more serious purpose. The Canadians hope to develop a practical plan whereby a major oil distributor (at any of its stations) will rent to drivers tapes on the history, economy, politics, and culture of areas through which they plan to travel. The driver will be able to turn the tape in at another station of the same company on arrival at his destination." (114:2 & 103:14)

F. Phonograph Records

The recent literature indicates that phonograph records have been the subjectof adult education utilization in only three areas: foreign language instruction, liberal arts education, and basic education. Hickel notes the use of phonograph records as supplements to broadcasts in foreign language instruction. (21:39-52) For the same purpose Lamerand states that "The desirability of using recorded materials for dictation, discrimination tests, and all aspects of oral testing except free conversation is so evident as to need no further comment. The possibility of using it with written exercises, especially the teaching of orthographical conventions deserves notice. (63:42) The Fund for Adult Education has adapted phonograph records from radio broadcasts for use in adult discussion groups on cultural anthropology and American history. Warren Schloat Productions, a subsidiary of Prentice Hall, has prepared what it calls "Sound Filmstrips" for basic education courses. "Sound Filmstrips" are a combination of a twelve inch phonograph recorded with a filmstrip. They are available on such subjects as "54 Functional Words," "The Great Depression," "Exploding the Myths of Prejudice," and "Ghettoes of America". (113 #4:5)

G. Print Media

As indicated above (page 1), print media, the oldest and most pervasive of the mass media, receive rather scant treatment in recent adult education literature. There are a few research studies which examine the print media alone or compare print media with other media, but the bulk of the literature is concerned with the combination of print media with other processes.

Of the studies commenting on print media use alone, two compare them with other processes. Schramm and others note that "whereas the older media, such as the book, could distribute the substance of teaching, the new media, notably radio and television, can share teaching itself." (109:116) A study by Welch and Verner indicates that in adoption of improved practices by restaurant operators the workshop method is significantly superior to the distribution of a bulletin. (65)

There are a few other studies which indicate trends or needs in the use of print media. Evans examined articles in general circulation magazines and newspapers on the subject of parent education appearing between 1946 and 1960 and compared them with those in the same publications between 1921 and 1945. She discovers that articles increased significantly in length and that the number of articles written at an elementary level of readability have doubled. (73:83) The Parker and Paisley study of Patterns of Adult Information Seeking concludes that "Men are more likely than women, and the better educated in both sexes are more likely to indicate that magazines provide practical education. . . . The adult most interested in the educational value of magazines holds a professional-management position at a high income level. . . . In seeking information concerning national affairs, adults more often turn to newspapers and magazines than to any other sources. Men are even more likely than women to use these print media," (1:73, 76, 96) Everly's survey of all the mass media in adult instruction finds that "Of the printed media, magazines involved the largest number of participants, nearly one-half million, ranking immediately after television as a major device for continuing education instruction. Already conveyers of information and advertising to highly specialized audiences, some magazines are readily adaptable to techniques providing the opportunity for structured learning from their pages." (113 #5:2-3) Johnson provides related examples of Everly's findings. He writes, "The New York Times and Time magazine are among the newspapers and magazines that now offer packages of materials for study groups. Designed for classroom use, they are equally useful for adult groups. Each of these packages contains materials on essentially one topic, such as water pollution.

The packages can be used as complete study programs in themselves or combined with television or radio offerings. In the latter case, however, the responsibilities for relating the study packets to the radio or television programs in an effective educational experience would lie with the educators seeking to bring them together." (103:6) A UNESCO study on Book Development in Asia includes experts estimates that almost seven million copies of printed materials will be needed for adult literacy training in Asia through 1980. (101:48)

There are many examples of the combination of print media with other processes. Johnson suggests that the educational effectiveness of television programs can be extended if the program will mention related books available from libraries and bookstores. He notes that this approach is the basis on which many library television programs have been built. (114:6) Johnson also describes the Great Decisions program of the Foreign Policy Association which makes extensive use of booklets and newspaper articles in conjunction with discussion groups and broadcasts. (103:33-34) Ohliger discovers that the use of supplemental printed materials for listening groups is increasing. (116:248) Other examples of combined use are discerned in correspondence study (11 & 14 & 18 & 103:43), in-service teacher training (107:169), technical skills training (98), basic education (57 & 82), academic education (78), foreign language training (21), and science-math education. (51 & 55)

H. Innovations

Four recent technological innovations in the mass media offer a great number of possibilities to the adult educator. They are the tele-lecture, VERB, ECS, and slow-scan television.

The tele-lecture system was devised by Michael Bellis when he was at the University of Omaha less than ten years ago. (103:14) NUEA notes that "Authoritative and outstanding speakers are often not available to a given audience because of busy schedules and time-consuming travel. These individuals can now make presentations to that audience in absentia through the use of a tele-lecture system, a long-distance telephone speaker-phone connection. . . The presentation itself can be effectively implemented by 2 x 2 slides of various graphics or pictures appropriate to the content." (76:64) Boswell and others have written a lengthy article on the tele-lecture for adult educators in Adult Leadership. The article tells of a research study comparing tele-lectures with more conventional classroom methods. Results show "no differences among the groups after training (and). . .no overall differences in student attitude toward the content or toward presentation characteristics. . . . (Teachers) were enthusiastic about the method and volunteered to teach additional courses." (99:322) The article concludes "The two way hookup also helps by making the instructor available to the student. . . . Coupled with the fact that tele-lecture allows the student to continue his education without the inconvenience of travelling from his home town, these factors produce a healthy climate for the educational process. . . . We are presently seeking funds to implement the program which expands the use of para-professional assistants and features independent work, perhaps with programmed texts or teaching machines, on the part of the student." (99:338) Johnson notes one weakness of the tele-lecture system. "The quality and volume of sound drops with each additional outlet and beyond 18 to 20 outlets, transformers and additional amplifying equipment are necessary to interconnect the pupils. These measures, of course, send costs soaring." (103:16)

The NUEA has this report on a related innovation. "The tele-lecture system has been combined recently with a new visual tool, VERB (Victor Electowriter Remote Blackboard), making it a more versatile and effective instrument of classroom communication. VERB is a device that puts an image on a screen in a classroom or auditorium through telephone line transmission from another location. The image can only be something that can be written or drawn on an 'Electrowriter' just as one would write on a pad of paper. The equipment cannot transmit photographs or printed copy. The system consists of two Electrowriter units, one of which serves as a sending unit, while the second serves as a receiving unit. A stylus is used to write on a roll of paper in the sending Electrowriter unit, while the receiving unit reproduces on a roll of paper the written message, sketch, or drawing on a roll of film by means of another stylus, at virtually the same instant as it is written or drawn on the sending unit. A specially engineered overhead projector is combined with the receiving unit to project the image onto a screen or wall." (76:66)

NUEA also describes a third innovation similar to VERB. "Designed for classroom use, an electronic system called Sylvania's Educational Communication System (ECS) enables an instructor at one location to transmit both voice and handwritten information to as many as six remote locations or classrooms over narrowband telephone lines. Anything that can be written can be transmitted any distance over telephone lines by the ECS, at the same time that it is written. An instructor or resource person talks with

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his audience, and, at his option, he can allow persons at the receiving locations to ask questions or to comment on the lecture of presentation. It permits each classroom to intercommunicate verbally with all classrooms and the teacher may decide which classes to query through the Instructor-Audio Control Unit. The system is similar in function to VERB, formerly described, but differs from it in that the graphic information written by the instructor on a six by eight inch writing surface of the graphic transmitter appears on a television monitor before his audience(s), instead of being projected on a screen. . . . The system, introduced and demonstrated publicly in May 1966, will serve up to six receiving locations, but it can be engineered to meet greater requirements of educational institutions and industry as desired. With minor modifications, the system can be engineered to record the audio and graphic information (which can be then played through the system)." (76:68)

Finally, Johnson discusses the fourth innovation. "Slow-scan television refers to a process whereby single pictures or 'snapshots' are transmitted rather than moving pictures. . . . Television cameras may transmit their snapshots over ordinary telephone wires, at great savings in money, rather than coaxial or microwave relay systems. Special receivers store the pictures and release them approximately eight minutes later. The Medical Communications Center at the University of Wisconsin plans to add slow-scan to its other media to diversify its approach to educational planning. . . . While considerably less expensive than open or closed circuit equipment, a slow-scan receiver still costs in the neighborhood of 15 to 20 thousand dollars. It is not, for that reason, practical for individual home use. It is, however, a device that could be usefully employed in schools, libraries, universities, club houses, community centers, and other places where numbers of people might come for individual study or discussion in small groups. It is generally less expensive than television at any distance over one mile, according to ITT who manufacture a system called VIDES. . . . The University of Wisconsin, as noted, plans to include slow-scan television in its program of continuing medical education." (103:7-8)

III. AREAS OF ADULT EDUCATION

A. Liberal Adult Education

The most extended treatment of liberal adult education in the recent mass media literature occurs in a dissertation by Breitenfeld. (94) He relates fundamental considerations of liberal adult education to policies in educational television programming. Taking a philosophic point ov view, Breitenfeld first assumes that educational television in the United States should be devoted to the growth of democracy. From this assumption he believes it follows that educational television programming should be carried on with the principles of liberal adult education as underlying factors. He reaches this conclusion because he believes that "liberal education is that education which frees man both personally and politically." (94:36) Thus, he claims that it follows that all men must be liberally educated if democracy is to survive and that educational television must play its part. Breitenfeld finds historical justification for this point of view in the fact that the Fund for Adult Education which played such an important role in getting educational television started in the United States set out to put educational television in the service of continuing liberal education. Breitenfeld concludes with this answer to the question, "What is the role of the principles of liberal adult education in educational television programming for adults? It is apparent that projects in liberal education for adults, of which television programming can be but one variety, appeal to the intellectual minority. Many adult educators argue that this is as it should be, and that through enlightenment of community leaders and influentials, education can seep through to the majority; educational telecasters agree. This prevalent traditionalist outlook (as opposed to the modernist outlook that liberal education should reach all the people) is the most apparent role played by liberal adult education in educational television programming." (94:202) However, in the last few years the tide may be running against Breitenfeld's thesis. The most recent nationwide Brandeis survey of educational television stations indicates that liberal arts programming for adults declined significantly from 1964 to 1966. (22:51)

One possible worldwide trend is that toward combining television with correspondence study for liberal adult education purposes. Examples of this trend include offerings of the French television network in Canada (115:31), the Radio University in Australia (106:195-196), the University of Georgia Center for Continuing Education (47:17), Kansas State University Extension (85:46), and the Extra-Mural Department of University College, Nairobi, Kenya. (86:60)

B. Public Affairs Education

The most cogent writing on mass media in public affairs education can be found in three papers by Johnson. (102, 103, & 114) Two were prepared for the Task Force on Innovation in Public Affairs Education, one for the World Peace Foundation. Another helpful publication is a pamphlet published by the Foreign Policy Association which contains a number of suggestions for utilizing mass media in world affairs programs. (67). An experimental study by Carter indicates, based on the assumption that parents watch television with their children, that it may be possible to increase adult viewing of public affairs educational television programs by getting teachers to encourage children to watch such programs and discuss them in class. (75)

In _Public Television and Public Affairs Education_ (102), Johnson engages in an extensive critique of the Carnegie Commission Report (111), and concludes, "Public Television will include a sizable bloc of programs in the public affairs field and these will be produced with little or no direct attention to the place they have or should have in a comprehensive program of public affairs education that goes beyond television broadcasts. That is, the framers of the proposal for Public Television have not conceptualized--or even really recognized--the relationship between television broadcasts and the informal continuing education of adults. It is likely, therefore, that public affairs education, as it relates to or attempt to use public affairs broadcasts originating with Public Television, will consist of scattered, individual, uncoordinated responses with unpredictable degrees of effectiveness." (102:2) He asks for a "framework hammered out in joint sessions of those controlling the individual parts of which the total program will be composed--the broadcasts, the written materials, the determination of audience and the selection of qualified resource people to appear on or contribute to each part of the combined operation. . . . The principle at stake is that the selection or definition of issues, particularly national ones, around which to build educational activities should not be the responsibility of Public Television, universities and colleges, or national agencies alone. It should be a joint decision in which all participate. . . . Clearly some mechanism that fixes responsibility for ensuring that the potential partners in an educational enterprise actually come together is needed if organizational cooperation is to be more than an occasional flash." (102:14-16)

In The New Media in Public Affairs Education, Johnson outlines a number of technological innovations that hold promise for the area. (103) He also examines two of the most successful recent public affairs programs utilizing the mass media: The Town Meeting for the Twin Cities and the Great Decisions programs. Both of these programs involve heavy use of the listening group approach. Ohliger has written an article for Adult Leadership which indicates the impact that listening groups can have on public affairs. (116)

In Extending the Educational Influence of Television Johnson lists six techniques for accomplishing the task. (114) He ends by calling for the applications of an altogether different approach to public affairs education via the mass media--the systems approach, which is described in detail above (see page 24).

C. Academic Education

Two projects stand out in this area: Japan's broadcast-correspondence high school and Chicago's TV Junior College.

Schramm and Hatano provide detailed evaluations of the Japanese program. (106:137-163 & 115:95-96) Schramm notes this unique characteristic. "The Japanese correspondence plan is different in that it includes a certain number of days each year to be spent in a school, so that the correspondence student may have some of the advantages of group activities and direct supervision from a teacher. The requirement is usually that the correspondence student must spend twenty days a year in this manner, but it is reduced by three-tenths if he follows the radio courses, five-tenths if he follows the television, and six-tenths if he follows both radio and television courses." (106:138) On cost and effectiveness he comments, "The cost per pupil in the broadcast-correspondence school is substantially less than in a residential school. . . . Although broadcast-correspondence high school study is cheaper than study in a residential high school, such broadcast-correspondence education seems to be virtually as effective." (106:155)

Erickson, Chausow, and McCombs examine the Chicago TV Junior College. (78 & 107:101-127) McCombs reports that "By December 1965 some 122 students had completed all the courses for the Chicago City Junior College degree by television. Another 1,000 had completed their degrees through a combination of television courses and campus classes." (107:101) He indicates that the retention rate has reached as high as 87 percent. (107:115) Erickson and Chausow give this reason for the high retention rate. "Retention in a given course was raised by an increase in the interaction of students with learning materials and with teachers through mail-in assignments, trial tests, face-to-face conferences, and telephone conference hours." (78 (1960):10) On the cost McCombs states that "the break-even point in Chicago came at about 400 credit registrations per course." (107:127) Also on cost Erickson and Chausow comment, "The cost of educating credit students by television, in the numbers registered in Chicago, is a little more than the cost of educating them in the classroom. If the registration could be increased by a fraction which may be as small as a third, the cost of television teaching would compare favorably with the cost of classroom teaching. However, we urge that the utility of a junior college television curriculum not be decided solely on the basis of comparative costs. The television courses are reaching a group of students most of whom would not otherwise take junior college work. It is serving a group of handicapped and otherwise restricted students. It is reaching a group of non-credit students, which averages several times the size of the group studying for credit. It is also reaching a group of casual viewers who are registered neither for credit nor without credit--an 'eaves-dropping' audience about which we know very little but which is estimated to range from five to twenty-five thousand persons per program." (78 (1960):5-6) Erickson and Chausow believe that an important reason for the success of the Chicago project is that it is so well integrated with the conventional educational system. (78 (1958):5) They also believe it is important that "Responsibility for educational content best rests clearly with the teacher, though he could be receptive to suggestions from the producer, director, and other consultants who could help him achieve his educational goals." (78 (1960):9)

There are a number of other examples of academic education via the mass media throughout the world. These include the Radio University in Australia (106:195-196), the French television network in Canada (115:31), and the proposal for the British University of the Air. (12)

D. Basic Education

The primary mass media emphasis in this area is on the use of television to combat illiteracy. In his overview of the place of television in dealing with the problem, Tyler reports "The advantages of using instructional television are such that it pays off, both in terms of quality of instruction and in terms of making use of volunteer and unqualified classroom teachers, when, say, as few as fifty groups are involved. Above this arbitrary number, the economics becomes increasingly and, finally, overwhelmingly favorable." (104:316) On the televised lessons themselves he believes that it is very important to incorporate economic motivations. (104:317) He also lists one advantage and one disadvantage of televised lessons. "By employing instructional television, great numbers of partially qualified persons can be utilized to instruct literacy classes. . . . Using television, however, in no way helps with the problem of securing adequate meeting places; indeed, it may make the problem somewhat more difficult since to the requirements previously mentioned must be added that of electric power. To be sure, outside power is not needed if battery transistor sets can be employed, but at present these are not completely satisfactory for group use in terms of size, brilliance, and battery life." (104:320-321) After a survey of several of the projects throughout the world, Schramm and others conclude, "There is little conclusive evidence among our cases as to how well the literacy and fundamental education programs are working. Perhaps the best evidence comes from Niger where, in 1964/65, 6,000 of the 11,219 adults enrolled in the 197 teaching centers successfully completed their courses. This makes 53.5 percent and the total figure includes drop-outs from the course. . . . The major evidence is shown by the number of people who go through these programs and apparently join the company of literate citizens. Even in the absence of. . .studies, we can be reasonably confident that people are learning to read, write, and figure. . . . It seems that the trend is from resting most of the weight on the television or radio toward resting it on the direct teaching of the supervisor; the television or radio teacher becomes an aid to the local teacher, and the program is more efficient in proportion to the training of the local teacher and the ability of the television teacher and producer to give him the kind of support he needs." (109:84-85) In another medium experts estimate that to accomplish literacy training for adults in Asia 3.6 million books will be needed by 1970, 2.4 million in 1975, and almost one million in 1980. (101:48)

In the United States the most attention in the literature has been devoted to the Operation Alphabet project developed in Philadelphia. Luke and Shevlin have written extensive articles on this television series. (44 & 82) Luke states that "Altogether, about 100 cities--including nearly all of the largest in the United States--have shown Operation Alphabet, and some have scheduled second and third showings." (82:261) He also reports on a comprehensive study of the program conducted by Bunger at Florida State University. "Mr. Bunger found that teachers, administrators, and students were pleased with the telecasts themselves; they were highly complimentary toward the teacher and the teaching techniques he used. Criticism was voiced, however, in terms of the time the programs were scheduled (often early morning) and the speed with which the lessons progressed (one each weekday). The study seemed to indicate that the students who studied in groups with a volunteer teacher made no more progress than those who studied individually at home. Furthermore, the use of the home-study guide did not appear to make any difference in the reading improvement of Operation Alphabet students." (82:262) Houk describes another U. S. effort, one which uses closed-circuit television, the Chelsea Project. "In the fall of 1957, the Fund for the Advancement of Education initiated a four-year series of grants to the Chelsea

Closed-Circuit Television Project in New York City. The project, jointly sponsored by the New York City Board of Education, Hudson Guild Neighborhood House, and Language Research Inc., of Harvard University, had two main objectives: a) the attainment of a closer relationship between school and community, and b) raising the educational and cultural sights of an entire neighborhood. The location of the project was a low income housing development populated by Negroes and Spanish-speaking peoples principally from Puerto Rico, as well as native Caucasians of low socio-economic status. The community served by the project included a public school, a settlement house, and a municipal health center. These institutions were linked by coaxial cable to the housing development. During daytime hours, programs originated from the public school. These programs included courses in English, Spanish, elementary science, music, speech improvement, and health instruction, and were designed for the adult residents as well as for the children in school. In the evenings, programs planned primarily for the adult groups originated from the health center and the settlement house." (95:190) Bauernfeld of the Baltimore Public Schools tells how a "television series on basic reading for functional illiterates had evolved in Baltimore over eight years, using commercial station WBAL-TV. There are now five half-hour morning programs telecast before the Today Show, attracting men before they go to work and others coming off the night shift, plus Saturday morning and Sunday afternoon programs at elementary and intermediate levels." (113 #3:7) And Rocklyn, after a survey of programs in the U. S. Armed Forces utilizing tapes, concludes that, unlike other projects involving programmed instruction, it is necessary to have an instructor present to conduct literacy training. (96) Despite the fact that there has been a substantial injection of federal money into basic education projects in the U. S., there is evidence that the use of television for this purpose is declining. The latest Brandeis Survey of educational television stations indicates that, though basic education was the focus of attention by twenty educational television stations in 1964, it was ignored by all educational television stations in 1966. (22:49)

It is natural that there would be greater interest in television for literacy training in other countries than the United States. Tyler gives this picture of the dimensions of the problem abroad. "More than 700 million men and women over 15 years old--two-fifths of the adult world population--cannot read or write. . . . Even more serious, the recent expansion of primary school education has not been keeping pace with the population explosion, so that it has been estimated that the number of illiterates is increasing by as much as 20 to 25 million persons each year." (104:309) The earliest of the large-scale efforts to use television in building literacy was the Italian Telescuola program "It's Never Too Late" started in 1960. Schramm and others note that "even now, after six years, it is estimated that 15,000 adults meet three nights a week in about 1,000 viewing centers throughout the country, to view "It's Never Too Late," and practice what they have learned." (109:52) Lyle and Tarroni have contributed to the literature on this program. (35 & 108:13-29) Lyle, after a study mission to Italy, states, "The enrollment in the adult evening courses has. . .fallen as the reservoir of potential students was gradually decreased. . . . In the early phases of the program, more of the teaching load was carried by the television teachers since the monitors then used were generally volunteers without teaching qualifications. . . . The present practice is to use qualified primary teachers wherever possible in this capacity. The program at the time of the mission left the bulk of the actual teaching to the. . .monitor; the television presentation might better be considered as supplemental enrichment to the personal teaching of the monitor." (108:16,29) Lyle and Souza report on projects in Latin America which concentrate on literacy training at the place of employment. (57 & 107:79-98) According to Lyle a program in Peru has been most successful working with domestic servants. (107:98) Souza notes that since 1961 when a law was passed in Brazil requiring employers of over 100 persons to provide elementary education for adults there has been increasing use of television for this purpose. (57:17-21) Other examples of basic education programs throughout the world utilizing broadcasts include Radio Togo (107:211), Radiovision in Niger (108:43), the Radio Schools of Honduras (108:97), the Extra-Mural Department of Makerere University in Uganda (86:109), and the UNESCO television project for women in Senegal. (8) Several of these projects utilize listening groups.

E. Science and Math Education

It appears that science programming on American educational television stations is decreasing. The Brandeis survey indicates that the percent of programming for the college-adult instruction group declined in the science area from 23.4 to 8.7 between 1964 and 1966. (22:51) Examples of science and math television programs around the world include brief lessons on math and physics in Czechoslovakia (55 & 115:63), biology and physics courses for college credit on the French network in Canada (115:31-32), a new math course in Saskatchewan (62:52), a basic algebra course combining television with programmed texts in Algeria (107:170), a statistics course with correspondence work in England (11), a physics course using correspondence study in Wisconsin (85:46-47), a statistics course in Pittsburgh (77:14), and a course on the general development of science bringing together television with texts and listening groups prepared by the American Foundation for Continuing Education. (51)

F. Foreign Language Education

It is possible that the offering of foreign language courses on television is often motivated by political reasons. In Czechoslovakia the first foreign language course on television was Russian with an advanced course in the same language offered soon thereafter. (115:60) In Canada there are English television courses for French speakers and vice versa. (115:29,33)

There is quite a bit of interest in broadcast foreign language courses in Europe. Rowntree reports that in England there is an increasing use of radio for foreign language teaching accompanied by printed materials. (19:53-54) Hickel finds five common characteristics of foreign language television broadcasts in Western Europe: 1) the intention is "cultural" entertainment with the emphasis on language for travellers; 2) the target is spoken language, as defined by recent structural linguistics research; 3) even though emphasizing entertainment some attempt has been made to subtly introduce such didactic principles as repetition, and use of many examples; 4) there is some attempt to correlate with the use of other media such as textbooks, getting newspapers to reprint dialogue, and the use of supplementary phonograph records; and 5) there is some attempt to make programs adaptable to use in several

European countries by the addition of material or different voice tracks. (21:39-52) Rovan notes that on Bavarian television there has been "undoubted success of the programs giving an introductory course in Italian. The Italian teachers at the peoples' universities integrated half-hour television programs into their two-hour courses and it was stated that after three months those who had enrolled were still working enthusiastically, while normally there was a 30 percent drop-out. Conversely, the fact that these programs cannot be substituted for lectures in the peoples universities was confirmed and where attempts have been made to do so, the result has been an immediate setback." (56:2-3)

In the United States the Brandeis survey indicates a decrease in foreign language instruction on educational television stations from 8.6 to 7.7 percent between 1964 and 1966. (22:51) A recent American development is the preparation of lengthy self-instruction courses on tape in Russian, Chinese, and Vietnamese for the Armed Forces. (96)

Hatano notes that on Japanese television "language courses occupy a considerable portion of the educational program time and attract a large audience." (115:91) Japanese television courses are offered in English, German, and French. Tanzania is experimenting with foreign language courses on radio utilizing listening groups. (113 #2:7) An Australian book called _Language Teaching for Adult Education_ contains a number of comments on the great value of tapes and records for language teaching purposes. (63:42)

G. Business and Industry

In 1966 Ivancevich and Donelly wrote that "industrial use of television has been minimal." (93:666) The tide may be turning, however. The Brandeis survey reports that, whereas in 1964 there was no training in supervision on educational television stations, one week in April 1966 saw 54 fours devoted to it. (22:49) In Congressional testimony Gladmon indicates "South Carolina on a statewide basis has enrolled as many as 3,100 management personnel in one (television) course. . . . I am informed that Virginia, North Carolina, South Carolina, Georgia, Maine, upstate New York, Pittsburgh, St. Paul and Cleveland are engaged in this (management television) program. San Francisco, Boston and other areas are now setting up management committees and working toward the institution of adult education. . . . In September 1964, after many months of planning, WQEX (Pittsburgh) began televising its first formal management series. These programs were put together expressly to help managers keep abreast of what is happening in the management world today--new concepts, ideas, and often a completely different view of the over-all management picture. After just three years of operation in the management field, we find that 158 companies enrolled 6,000 managers or supervising personnel." (83:6-8)

Broadcast education in this area in foreign countries is apparently limited to technical skills training, a portion of the field neglected in the United States. Hatano states that in Japan "Vocational and technical correspondence courses (combined with television and radio) began in 1961. Known as the technical skill education program, it concentrates on slide-rule handling, bookkeeping, television repair, and the use of the abacus. . . . According to a survey conducted by the Institute of Broadcast Culture, the estimated audience figures for each class in 1962 or 1963 were as follows: slide-rule, 62,000; bookkeeping, 51,000; television repair, 134,000; abacus, 600,000." (115:90-91) In Czechoslovakia television courses are offered in welding technology, machine tool cutting, reading engineering drawings, and slide rule calculation. These courses are intended for groups of viewers at their places of work. (115:63-64) In Argentina 4,500 adults enrolled in fashion and electrician courses combining television with correspondence study. (53:8)

In addition to television there are a number of examples of the use of other mass media for business and industry purposes. Adams describes the utilization of tape recorders and broadcast over multiplex FM to train typists. (81) Whitted and others evaluate a completely automated multi-media self-study program for teaching about transistors. The program includes tape recordings, slides, sound film, programmed texts and other print media. They report that a comparison with conventional methods shows no significant differences. (98) Stoller recommends the use of videotape in sensitivity training (74), and Payne generalizes the recommendation to all of management training. (92) Finally, Bartlett suggests the use of the tape recorder in case study and role playing as an alternative to T-groups for management education. (84)

H. Continuing Professional Education

In mass media continuing professional education the greatest attention is paid to television projects for teachers and medical personnel. The Brandeis survey concludes that teachers are U. S. educational television's "largest special audience". (22:48) From 80 hours devoted to in-service teacher education on educational television stations in 1964 the number increased to 130 hours in 1966, accounting for one-fourth of the adult programming. (22:48) Programming for physicians over educational television stations doubled in the same period. Twenty educational television stations offered programs for physicians in 1966 compared with ten in 1964. (22:49)

In-service teacher education is increasingly seen as a fit subject for mass media utilization throughout the world. Schramm and others report "Evidence on the effectiveness of media systems for teacher training has been almost uniformly favorable, although firm data are scant. The greatest amount of research evidence comes from Columbia. From the beginning of school television in that country television has been used to instruct teachers as well as pupils. One of the greatest problems proved to be that teachers were less attracted than had been expected to lectures on topics of presumed usefulness to them--for example, a talk on child psychology--and consequently did not watch many of the programs intended for them. More recently the pattern has been to offer entire courses dealing with subject-matter the teachers themselves might have to teach, rather than single lectures on professional topics. Such a course on modern mathematics was offered in 1965, in 17 half-hour programs. The Ministry of Education was strongly interested in this course, and urged teachers to watch it. Almost all did so. A number of watch-and-discuss groups were organized among teachers, by the Peace Corps volunteers assigned to utilization. Research was designed to measure the results. The amount of learning that resulted was most impressive. In three separate experiments, involving more than 1,500 teachers, the difference between the mathematics scores of those who viewed the course and those who did not was significant at a very high level of statistical confidence. The more programs a teacher viewed, the better score he made. But if he viewed in a supervised discussion group, he made still a better score. (The difference between the results of group and individual viewing were significant at the .01 level). . . . (Thus) on a little firm evidence from Columbia and a considerable amount of observation and evidence on the part of school officials in the UNRWA program, Algeria, New Zealand, Columbia and Samoa, we can assert that any of several media-based systems can contribute to the in-service training of teachers." (109:78,89) Schramm also states, "the combination of correspondence study and broadcasting would be useful in developing countries to provide in-service teacher training." (106:161) Edstroem adds to this statement with a comment about the African situation. "Teacher training by correspondence, preceded and followed up by face-to-face courses and sometimes linked with radio, would undoubtedly help to solve the teacher problem." (86:39)

In Algeria, Lyle notes, "a course (for teachers) is being offered in basic algebra. Instituted in the winter of 1965/66 this program uses a programmed text coordinated with television teaching. . . . The aim is to see if students can master this content without the aid of personal interaction with a teacher. . . . The procedure is for the student to study the lesson and do the exercises. He then watches the half-hour long television lesson during which the teacher reviews and expands the basic concepts, giving particular emphasis to aspects which are likely to give students difficulty. After the television lesson, the student is to review the assignment and then proceed to the one following. . . . Since the television lessons are presented by the person responsible for the text, there is maximum co-ordination between the two components of the program." (107:170) On American Samoa, according to Schramm, "structured in-service (teacher) training is presented each week by the television teacher in a broadcast lesson dealing with a specific subject matter area." (106:18) In England Westward Television has broadcast programs for teachers in close partnership with Exeter University. (64:31) In Canada, writes Rosen, "A twenty-part mathematics series was produced for the in-service training of teachers by the Department of Education and the Saskatchewan Teachers' Federation in cooperation with the Canadian Broadcasting Corporation. The programs were designed to inform elementary teachers of the changes in the mathematics curriculum and to assist them in developing techniques for classroom presentation of the new mathematics. The programs were presented over six channels in the province, and over 2,000 viewers' guides were distributed." (62:52)

In the United States, Houk reports, "A number of experiments sponsored by the Ford Foundation and the Fund for the Advancement of Education studied possibilities for the use of television in both the pre-service and in-service education of teachers. For example, the Texas Education Agency (the state department of education) offered an introductory course in education, broadcast by 18 commercial television stations, to college graduates interested in preparing for teaching careers and to liberal arts college graduates who had been teaching on emergency certificates in order to start them on the way to permanent certification. In 1958/59, in addition to the course offered for prospective teachers, a special series of broadcasts entitled 'Texas Curriculum Studies' was offered to participants in a statewide curriculum study. A total of 25,400 teachers and school administrators registered for this course. In the academic year of 1960/61, the New York City Board of Education instituted a series of in-service education workshops designed to aid science teachers in the elementary schools and English teachers in the secondary schools.

A weekly half-hour televised lecture-demonstration was supplemented in the schools by ninety minute workshop sessions. The most extensive in-service education experiment was a nationally televised series of college level courses entitled 'Continental Classroom.' The courses which were primarily aimed at secondary school science teachers began in October 1958, and have continued to the present time." (95:183-184) Another recent U. S. project is noted by Laubenfels. She writes, "The Franklin County (Ohio) Mental Health Association Education Committee added a new project this year. This undertaking, the production of a series of television programs on 'Mental Health in the Classroom', was carried out in cooperation with Ohio State University and the Columbus, Ohio, and Franklin County Public Schools. Featuring such outstanding authorities as Dr. Frymier of Ohio State and Dr. Missildine, author of Your Inner Child of the Past, these seven telelessons were designed to give elementary teachers an insight into the mental health problems encountered in the classrooms. They were used during October and November 1967 as part of an in-service course for teachers. Teacher participation was conducted in three steps 1) group viewing followed by 2) group discussion with an appointed moderator from the school system, and 3) completion of an evaluation sheet provided by the Franklin County Mental Health Association. The manual which each participant received contained an excellent bibliography, and suggestions for related films and pamphlets available." (113 #2:6)

In addition to television, other media are being used for in-service teacher education. In Algeria, according to Lyle, three films have been used in weekly meetings with untrained teachers. Two films deal with methods of teaching reading, one with teaching foreign language.

The films show examples of teachers using approved techniques. Also Algerian correspondence courses in conjunction with print media and radio have been set up. Lyle notes, "Lessons for these courses are printed each week in both Arabic- and French-language newspapers and there are two weekly radio presentations." (107:169) In Australia the Radio University of the University of New South Wales offers post-graduate and refresher courses for teachers. (106:195-196) In the United States, reports the NUEA, "Teachers of educationally deprived pupils in six sparsely populated county school districts of northeast Iowa started an in-service training program in September 1966, using remote control chalkboards (VERB) and long distance amplified conference telephone sets. Funded under Title I of the Elementary and Secondary Education Act of 1965, the VERB/tele-lecture Project was developed by superintendents of the participating counties and served 1,200 teachers with enrollments of 23,000 pupils." (76:67) Cunningham writes on the use of videotape for in-service training of informal adult educators offered by the Ohio Cooperative Extension Service in a two week workshop. Cunningham states that the workshop was "directed toward the improvement of quality instruction for county and area Extension agents and state Extension specialists. . . . The recorder served two major functions during the workshop. One was to tape the teaching efforts of the participants in the workshop for self-evaluation feedback. . . . The second function of the videotape equipment was to bring pre-taped programs to the workshop. One program was taped in a 4-H Club leader's home with 4-H girls baking cookies. This served as a common experience to discuss 4-H member evaluation. . . . The videotape recorder served as an extremely valuable tool. . . (though) there are disadvantages of using the relatively inexpensive videotape equipment. The playback monitor on some equipment is extremely small. For every minute taped of teachers in action, an equivalent amount of time must be allowed in the program playback." (105:332)

Mass media courses for the medical profession are blossoming all over the map, but mainly in the United States. Both the British Broadcasting Corporation and Scottish Television have provided programs of post-graduate medical education under the aegis of the Council for Medical Education. (64:31) In Canada at television station CFPL in London, Ontario, according to Rosen, "in cooperation with the Committee on Continuing Education of the Faculty of Medicine, University of Western Ontario, (in 1965) a short, experimental series, designed to aid general practitioners, was produced. Fifteen such programs are planned for 1966/67." (62:61) The Radio University in Australia presents special post-graduate courses for dentists and other medical practitioners. (106:195-196)

In the United States there is a great deal of attention to the medical field. Gladmon writes, "We at WQEX (Pittsburgh) are engaged in broadcasting a one-hour once-a-week program in post-graduate medicine. Some 1,200 doctors in 70 hospitals participate for 33 weeks a year. Dr. Campbell Moses, Director of Post-graduate Medicine at the University of Pittsburgh and Medical and Science Director for the American Heart Association, made the following statement: 'Educational television has proven to be immensely useful in keeping doctors abreast of advances in medical practice. The technique, pioneered in Utah, has since been widely applied in Pittsburgh, South Carolina, Buffalo, Boston, California, Oklahoma, and Arizona. . . . In Pittsburgh we have used this technique for more than four years and not only to present continuing examples of the best medical practice, but also each week to call attention to local outbreaks of contagious diseases, to announce the availability of new drugs and also, and most importantly, to immediately alert physicians to new information about drug reactions as this material is released by the Food and Drug Administration. '. . .under the guidance of the Director of Continuing Education in the field of nursing at the University of Pittsburgh, we have been broadcasting a one-hour program for the last two years. This program is geared to the professional nurse employed by the general hospital. Its main objective is to provide more information on mental health concepts, such as caring for problem patients. Our survey shows we are reaching 40 to 60 hospitals and 500 to 800 professional people." (83:10-11) Johnson reports on efforts in Wisconsin and the far west. "The Medical Communications Center (of the University of Wisconsin Medical School) employes the telephone for a monthly medical conference with hospitals around the state. A lecture is given to which personnel in all hospitals listen, and each hospital is then called in rotation with an opportunity to ask questions growing out of the lecture. FM radio broadcasts enable small or distant hospitals to join the circuit and telephone in questions. . . . The University of Wisconsin plans to include slow-scan television in its programs of continuing medical education. . . . Television and radio in an Extended Hospital Training Program (University of California Medical Center, San Francisco) is involved in a three-year program to test the value of providing (in-service) training opportunities for personnel of 77 hospitals in the San Francisco Bay Area, the rest of Northern California, Southern Oregon, and Western Nevada. . . The University staff provides staff services to help each of the hospitals work out appropriate educational procedures for making the best use of the broadcasts in its own training program." (103: 7-8, 35-36, 43) A recent issue of Adult Leadership states that "In December (1967) the University of Vermont's College of Medicine started producing and broadcasting a series of programs for the continuing medical education of physicians. Vermont's educational television is interconnected with New Hampshire and Massachusetts via the Eastern Television Network, according to George W. Welch, Director of the Office of Continuing Medical Education at the University of Vermont. In the nursing field, the College of Medicine is sponsoring a 25 program series entitled 'Returning to Nursing,' aimed at the inactive registered nurses in the region." (100:336) The Hospital Continuing Education Project of the Hospital Research and Educational Trust has developed courses on film for the in-service training of ward clerks and food service workers. (113 #4:8)

Other professions are also beginning to receive the attention of the mass media for in-service training purposes. In England a television program was developed that integrated print media, listening groups, and correspondence study in a course for voluntary and professional social workers. Sixteen half-hour programs were broadcast in late 1965 and early 1966, with 230 listening groups formed. (14:23) Also in England, the British Broadcasting Corporation has planned and produced a series on new materials for engineers in conjunction with Imperial College. (64:31) Australia's Radio University also offers refresher courses for engineers. (106:195-196)

In the United States, Rutgers has developed a course making extensive use of films for the training of community action trainers. (88) Finally, Gladmon reports, "In the police and fire area we find an expanding program being done by New York City officials. Each week thousands of policemen and firemen are receiving some on-the-job training via television. There was another police program developed in Buffalo, New York, but it had to be dropped because of lack of funds. The Los Angeles Fire Department now has a major proposal for the use of television as a training medium, and it may be on the air at this time." (83:2)

1. Agriculture and Home Economics

There is sporadic use of the mass media for agricultural and home economics education purposes. Tahy reports a television course for dairymaids and those looking after cattle in Czechoslovakia. He states, "Teachers in this course were zoo-technicians from agricultural enterprises or teachers from expert agricultural schools. . . . The survey carried out since has shown that out of 31,410 people from agricultural enterprises who took part in 1,863 courses, 3,964 passed the final examination successfully." (115:65) In Canada, the most famous program was the Canadian Farm Radio Forum. Ohliger explains the reasons for its recent demise and its impact on the growth of similar forums in underdeveloped countries (120), which in turn are described by Schramm. (106 & 109) The Farm Forum Project Committee discusses the value of the Canadian Farm Radio Forum for farmers and rural people in one province. (79) More recently in Canada, a television short course in farm accounting was combined with correspondence work in Manitoba. Siemens reports that a research study reveals a significant difference in knowledge gained and in adoption of improved practices between those who were actively involved in the correspondence portion and those who just viewed the television programs. (68:26-27) Also in Canada, Verner and

Gubbels note the strong impact of the mass media at the awareness stage of innovation adoption by dairy farm operators. (89:32)

In the United States the Agricultural Extension Section of the North Carolina Department of Public Instruction recently offered a television course in fertilizer and lime use which incorporated listening groups. (69) Radio station KUSD.in South Dakota plans special services to farmers through multiplex FM. (103:9) Cunningham reports on the use of videotape for in-service training of agricultural extension agents. (105:332)

In the home economics area, which is so often allied with agriculture in the Cooperative Extension Service, there are a few developments noted in the literature. Hatano mentions the extensive use of listening groups for providing home education to women in Japan. (115:92) Fougeyrollas comments on listening groups organized to improve health practices among the women of Senegal. (8) In Canada the University of Saskatchewan is using television to teach clithing construction. (113 #1:4) In the United States Hull arranged for a viewing panel to rate a home economics television series. She notes a wide disparity between the high rating for "presents information worth knowing" and the lowest rating for "entertaining as well as educational". (10) Howard states that women overwhelmingly prefer the mass media as vehicles to receive the information of home economics extension, based on a research study she conducted. (72:41)

J. Parent Education

A book originally published in 1962 makes a number of predictions about the next ten years in educational television in the United States. One of the predictions is that "Open-circuit telecasting will probably show increasing emphasis on child rearing and other content touching upon the parent-child relationship." (60:28-29) However, recent literature shows no such increase. In fact, the only evidence of parent education activity on educational television in the United States is a report of a project in Cleveland which is now engaged in producing special television programs directed to parents gathered in viewing centers in the inner city. (113 #3:6)

The book mentioned above, Educational Television: The Next Ten Years, also states that "Open broadcast of actual classroom content is important in that it serves to educate parents as well as students, permitting them to see what education is and what it does." (60:28-29) Hatano notes that in Japan "One of the most important activities of the PTA is its recent experiment in encouraging mothers to watch at home the television programs for the schools. Mothers thus learn the same things as their children, and learn at the same time how the unit of the subject is being taught, and how it compares with the way they were taught in the past." (115:114) The Japanese have also organized a number of special PTA television classes. According to Hatano, "The primary purpose of the PTA television class is not only to study through television the common problems of promoting better education for children, but also to foster a habit of independent thinking through discussion of the matters derived from the common problems. The PTA television class is organized at the community level with the elected PTA officer of each community as the leader of the television class. . . . The class is open at one p.m. every Saturday afternoon." (115:113) The Japanese women's class which involves 3,000,000 women in 20,000 listening groups is often concerned with such parent education subjects as child psychology and child guidance. (115:92)

Evans recently conducted a study of articles on parent education in popular newspapers and magazines in the United States. (73) She notes that over the past forty years such articles in magazines, especially women's magazines, have vastly increased while the number in newspapers has stayed the same. (73:81) Articles have also increased significantly in length, which the number of articles written at an elementary level of readability has doubled. (73:83)

IV. BIBLIOGRAPHY

NOTE ON AVAILABILITY

Some references in this bibliography are identified with "AC" and "ED" numbers. These numbers have no subject significance; they are accession numbers, useful if you should need to correspond with ERIC/AE about any of these documents.

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1. AC 000 967

Parker, Edwin B. INFORMATION SEEKING AND COROLLARY BEHAVIORS BY SOURCE OF INFORMATION (IN Parker, Edwin B. PATTERNS OF ADULT INFORMATION SEEKING, 1966, Chapter 3, pp. 25-95). 1966. 71p. Stanford University, Stanford.

ABSTRACT: This chapter from a larger study conducted in San Mateo and Fresno, California, during 1964-66, analyzes survey data on uses of sources of information, i.e., mass media (including ETV), interpersonal sources, and various forms of adult education (evening classes, lectures, discussion groups, correspondence courses, private lessons, independent study). Numerous correlations were attempted with socioeconomic and demographic data--primarily age, sex, income, occupation, education, and geographic location--and data on the motives and subject areas involved (practical information, vocational education, cultural enrichment, etc.). Findings show the following, (1) participation in adult education tends to combine with print media use among the better educated and with broadcast media use among the less educated--(2) overall joint use of liberal adult education and all media is strongest among the well educated--(3) age and education were the strongest indicators of joint use, with sex playing a smaller, more specific role, e.g., vocational education favored by men, arts and crafts by women--(4) younger adults and better educated older adults are high in joint use, while older, less educated people are low even in recourse to media, and other persons--(5) younger, more educated adults are apparently most receptive to such technical innovations as computers and communication satellites, and least dependent on radio and TV. Document includes 39 tables. (ly)

2. ED 012 843

Ford Foundation. PUBLIC POLICY ISSUES; REPLY LEGAL BRIEF, AND TECHNICAL AND ECONOMIC DATA, BEFORE THE FEDERAL COMMUNICATIONS COMMISSION, IN THE MATTER OF THE ESTABLISHMENT OF DOMESTIC COMMUNICATIONS SATELLITE FACILITIES BY NON-GOVERNMENTAL ENTITIES (Docket 16495) Three vol. Ford Foundation, New York. Ginsburg and Feldman, Washington, D. C. Dec 1966. EDRS PRICE MF-$1.25, HC-$12.80. 320p.

ABSTRACT: The three parts of this Ford Foundation Submission provide information on broad issues of organization and public policy as they relate to satellite model systems BNS-3 and BNS-4, on legal problems of authorization and control, and on the technical characteristics, costs, and broadcast spectrum limitations of each system. Volume I outlines financial issues (potential savings and possible tax revenues), reviews the uses and implications of noncommercial and instructional television in the United States and abroad, and suggests the pattern of service to be followed in the satellite system. In Volume II, numerous legal precedents are introduced affirming FCC power to authorize such systems and the compatibility of the proposal with the public and national interest. Volume III includes background matter on common carriers and existing networks, and charts and figures on satellite transmission, microwave relay, and electromagnetic interference. The study made by IBM, of potential interference in the greater New York City area in a severe rainstorm, is included. (ly)

3. ED 012 844

Ford Foundation. SUPPLEMENTAL COMMENTS, AND SUPPLEMENTAL LEGAL BRIEF, BEFORE THE FEDERAL COMMUNICATIONS COMMISSION, IN THE MATTER OF THE ESTABLISHMENT OF DOMESTIC COMMUNICATIONS SATELLITE FACILITIES BY NON-GOVERNMENTAL ENTITIES (Docket 16495) Two vol. Ford Foundation, New York. Ginsburg and Feldman, Washington, D. C. Apr 1967. EDRS PRICE MF-$0.50, HC-$4.28. 107p..

ABSTRACT: Volume I of the Ford Foundation response to the original and supplemental Federal Communications Commission (FCC) notes of inquiry contains suggestions for cooperation between the proposed systems of the Corporation for Public Television (CPTV) and the Broadcasters' Nonprofit Satellite Corporation (BNSC) on structure, fiscal policy, and programming, Senate and Presidential proposals for CPTV, the President's order for a national test satellite program, the Ford Foundation statements on pertinent issues, and its recommendations for a favorable FCC policy declaration on BNSC. Testimony in Volume II, primarily a reply to objections raised in the Comsat Supplemental Brief of December 1966, asserts the power of the FCC to authorize noncommon carrier communication satellite facilities to meet

specialized domestic needs, and argues that the proposed organization and operations of BNSC would not conflict with other legislation. (Volume I includes appendixes which compare and critically evaluate satellite system proposals made by the Ford Foundation, Comsat, and American Telephone and Telegraph Company.) (ly)

4. AC 001 155

Carlson, Robert A. A BRIEF HISTORY OF EDUCATIONAL TELEVISION IN THE UNITED STATES, WITH EMPHASIS ON THE DEVELOPMENT OF NATIONAL EDUCATIONAL TELEVISION AND THE CONCEPT OF PUBLIC TELEVISION. National Educational Television, New York. Jun 1967. 22p.

5. ED 012 842

Ford Foundation. COMMENTS, AND COMMENTS AND LEGAL BRIEF, BEFORE THE FEDERAL COMMUNICATIONS COMMISSION, IN THE MATTER OF THE ESTABLISHMENT OF DOMESTIC NON-COMMON COMMUNICATIONS-SATELLITE FACILITIES BY NON-GOVERNMENTAL ENTITIES (Docket 16495) Two vol. Ford Foundation, New York. Ginsburg and Feldman, Washington, D. C. Aug 1966. EDRS PRICE MF-$0.50, HC-$4.52. 113p.

ABSTRACT: Volume I of the Ford Foundation Submission to the Federal Communications Commission states the Foundation's commitment to educational broadcasting, describes the scope, services, components, and cost of a proposed national Broadcasters' Non-profit Satellite Service (BNS), asserts the social, economic, and operational benefits of such a system, and discusses the feasibility of accommodating BNS transmission under existing restrictions on power density or even of moderating these restrictions. Volume II contains a legal brief and arguments in support of the following contentions--(1) that the Communications Act of 1934, the Communications Satellite Act of 1962, and the international communications satellite agreements made in 1965 do not preclude creation of such facilities by domestic noncommon carriers, and (2) that the national and public interest would be served by authorizing a nonprofit corporation to establish and operate such facilities for national commercial and noncommercial television. (Document includes a glossary, 10 technical charts and figures, and five tables.) (ly)

6. ED 018 132

UNESCO. RADIO AND TELEVISION IN THE SERVICE OF EDUCATION AND DEVELOPMENT IN ASIA. (Reports and papers on mass communication, 49). UNESCO, Paris (France). 1967. EDRS PRICE MF-$0.50, HC-$2.44. 59p.

ABSTRACT: Educational broadcasting in Asia not only serves the pressing needs of primary, secondary, and higher education, but also provides for popularization of knowledge, literacy education, civic education, training and guidance of educators, rural and urban youth programs, and vocational guidance and education. A particular need is seen for national and regional training in techniques of educational broadcasting, organization and planning of programs, and program utilization by adult education leaders and other teachers. In addition to basic training at the national level, a regional institute should be created to provide advanced broadcasting courses and seminars, with emphasis on contributing to education and social development in Asia. Other major needs and recommendations concern preservice and inservice teacher training, broadening of the outlook and skills of women, improved transmission facilities, audience research, and information and program exchange among Asian nations. Document includes an appendix, review of national broadcasting structures, national statistics on radio and television receivers and on provision of adult education and school broadcasts, and a survey of recent and proposed developments in each country. (author/ly)

7. ED 011 092

Lutz, Arlen E. and Charles L. Stonecipher. SOURCE CREDIBILITY AS AN EVALUATION TOOL FOR EXTENSION ECONOMISTS. Nebraska University, Lincoln. Agricultural Extension Service. Jul 1966. EDRS PRICE MF-$0.25, HC-$0.36. 9p.

ABSTRACT: This study sought to appraise the effectiveness of presenting livestock feeding information by television. Audiences of Outlook telecasts in the Omaha and Sioux City areas rated extension economists on an 18-item source credibility checklist with a 7-point scale. Rating sheets were returned by 26 persons at Omaha and 40 at Sioux City, and 11 extension administrators and agricultural editors also responded. Ratings were made on safety, dynamism, qualification, and utility--i.e., audience confidence, speaker's personality and effectiveness of presentation, authority of the speaker, and applicability of the program to the situation. Kropp-Verner attitude scales were administered to 66 livestock feeders who had made source credibility ratings, and to 205 other livestock feeders. Source credibility scores ranged from 5.24 to 6.19. The relatively high ratings, especially on safety and qualification, indicate that the economists were seen as credible information sources. Among responses to the 18-item Kropp-Verner scale, 27 indicated high satisfaction, 20 indicated moderate satisfaction, and 9 indicated slight satisfaction. Results of the shorter Kropp-Verner scale were comparable. Home television audiences proved basically homogeneous in income, educational level, size of feeding operation, and related characteristics. No significant differences in presentation were noted. Document includes 4 references. (ly)

8. ED 018 108

Fougeyrollas, Pierre. TELEVISION AND THE SOCIAL EDUCATION OF WOMEN: A first report on the UNESCO-Senegal pilot project at Dakar. (Reports and papers on mass communication, 50). UNESCO, Paris (France). 1967. EDRS PRICE MF-$0.25, HC-$1.56. 37p.

ABSTRACT: In the 1965-66 UNESCO-Senegal pilot project, a preliminary, and a followup, survey were made to assess the effectiveness of educational television (ETV) in imparting vital health information and constructively changing attitudes and behavior. The project included regular weekly programs in the Wolof language for about 500 women in 10 television clubs throughout greater Dakar, Senegal. The women were questioned on causes and control of malaria, dysentery, typhoid, and tuberculosis, on dietary practices, and on interests and problems. Major findings and conclusions were that--(1) such courses encourage expression of opinion and generate practical action, (2) content is more readily accepted and learned when conflict with tradition is absent, presentation is adequate, and motivation is strong, (3) young women are generally more open-minded and better able to give correct answers than are older women, (4) educational interests lean toward child care, housekeeping, and women's problems, (5) effective mass media education requires discussion groups; and (6) ETV heightens awareness of social problems and can be a potent factor in national development. Document includes questionnaires and 63 tables on personal and socioeconomic data, opinion and attitude changes, views as to future useful program themes, and patterns of diffusion. (author/ly)

9. AC 000 392

Widstrand, C. G. RADIO AND ADULT EDUCATION IN TANZANIA, SOME CONSIDERATIONS. (Adult education studies, 1) University College, Dar es Salaam (Tanzania). Institute of Adult Education. Apr 1966. 13p.

__ABSTRACT__: This is a discussion of the problems of communication by mass media and the possibilities of adult education by radio in Tanzania. It includes a list of programs. (aj)

10. AC 001 105

Hull, Karen B. A VIEWING PANEL EVALUATES "TABLE TALK", A SERIES OF HOME ECONOMICS TELEVISION PROGRAMS. REPORT 10. Cornell University, Ithaca. Office of Extension Studies. Oct 1966. 18p.

11. AC 001 094

Perraton, H. D. CORRESPONDENCE TEACHING AND TELEVISION. (A report from the National Extension College, Apr 1966). National Extension College, Cambridge (England). Apr 1966. 21p.

__ABSTRACT__: A report of a small pilot experiment in the teaching of statistics by television and correspondence, together with a note on some implications for a "university of the air". (author)

12. AC 001 677

Great Britain, Department of Education and Science. A UNIVERSITY OF THE AIR (White Paper presented to Parliament by the Secretary of State for Education and Science by Command of Her Majesty). Secretary of State for Education and Science. Cmnd. 2922. Feb 1966. 7p.

__ABSTRACT__: A University of the Air, designed to provide television and radio lectures and high caliber correspondence courses reinforced by residential courses and tutorials, has been proposed for Great Britain. The system will have three principal aims--to help raise educational, cultural, and professional standards generally by making rigorous scholarship available to all interested parties, to enable students to pursue programs of further education leading to degrees and other qualifications, and to help train leaders for developing nations. The system should have a well-staffed administrative center and regional centers, cooperate with other educational bodies, stress generalized degree programs without excluding other types, conduct regular evaluations of programs, use a variety of media (including programmed instruction), and include, along with its cultural and basic courses, subjects of contemporary social, industrial, and commercial importance. Also needed will be a nucleus of production facilities, use of peak viewing hours, and (at the senior level) special academic and administrative personnel. A chart of the proposed organizational structure is included. (This White Paper was presented to Parliament by Command of Her Majesty, Feb 1966. It is available, for 9d, from Her Majesty's Stationery Office, London, England.) (ly)

13. ED 012 872

United States Congress, Joint Economic Committee. AUTOMATION AND TECHNOLOGY IN EDUCATION. Aug 1966. EDRS PRICE MF-$0.25, HC-$0.68. 17p.

ABSTRACT: Recent developments in such technological aids as educational television, videotape, computerized instruction, microfilms, and talking typewriters, have the potential to revolutionize the American system of education, to alleviate socioeconomic ills, and to eliminate adult illiteracy. However, long-range benefits will depend greatly on basic and applied educational research, sound curriculums and administrative structures, and effective use of both teachers and advanced equipment. Therefore, educational institutions, government agencies, and manufacturers of educational "hardware" and "software" must work together to develop systems of technology geared to the genuine needs of students. (This was a report of the Subcommittee on Economic Progress of the Joint Economic Committee, to the 89th Congress, Second Session and is also available, for 10 cents, from the U. S. Government Printing Office, Washington, D. C. 20402) (ly)

14. AC 000 089

Hancock, Alan and John Robinson. TELEVISION AND SOCIAL WORK, A CASE HISTORY OF A PROJECT IN ADULT EDUCATION, BASED ON THE BBC-2 TELEVISION SERIES, 'THE SOCIAL WORKERS,' OCTOBER 1965-FEBRUARY 1966. National Institute of Adult Education, London (England). Sep 1966.

ABSTRACT: A combination of television, group study, private study, correspondence study, and practical work provided an extensive introduction to the nature and methods of social work, principally for volunteer and part-time workers, through 16 half-hour programs on social work and administration broadcast on BBC-2 between October 5, 1965, and February 8, 1966. Supporting elements were--(1) a handbook for home and group study, (2) a network of over 200 study groups, (3) a National Extension College (Cambridge) correspondence course for 100 home students and group members, and (4) a research project of the Department of Sociology, University of Exeter that examined reactions of group members and correspondence students. Criticisms concerned superficiality of broadcasts, reflected an unexpectedly well-informed committed participant group, and suggested failure of the series to attract general-interest National Extension College students. Use of study groups, correspondence study, and handbooks to supplement the broadcasts was favorably received. (Project organization and production of the series are discussed. Appendixes are letters to project consultants, organizers of the study groups, and study groups.) The document is available, for six shillings, from the National Institute of Adult Education, 35 Queen Anne Street, London. (ly)

15. AC 000 501

Friendly, Fred W. WORLD WITHOUT DISTANCE (Address to NAEB Convention, Kansas City, Mo. Oct 24, 1966. (IN NAEB Journal, 26(1)/3-12, Jan-Feb 1967) 1967. 10p.

ABSTRACT: The present system of distribution of educational television and radio programs by audio and video tape is obsolete, there should be simultaneous distribution. Three problems of educational television are that (1) commercial networks do not have enough airtime, (2) educational television does not have enough resources, financial or professional, and (3) educational television could not afford interconnection to provide simultaneous distribution.

There should be a global system of satellites, which would drastically reduce costs, the savings to be applied toward funding, financing, and programming for educational television. As proposed in two models, broadcast nonprofit satellite projects one and two, 44 to 68 channels could make possible low-price interconnection for commercial networks and free interconnection for educational radio and television stations. Certain progress has already been made toward this goal--there has been dialogue about cooperative planning, our three present networks amount to a single service through similar programming, and interconnection for educational television is generally acknowledged to be eventually assured. (This article appeared in the NAEB journal, published bi-monthly by the National Association of Educational Broadcasters, Urbana, Illinois 61803) (eb)

16. AC 000 502

Miller, Paul A. A YEAR OF DECISION (Address to National Association of Educational Broadcasters Convention, Kansas City, Mo., Oct 24, 1966.) (IN NAEB Journal, 26(1)/20-27, Jan-Feb 1967.) 8p.

ABSTRACT: We must look at the needs of our society and its citizens and ask to what extent the capacity of non-commercial broadcasting has been used to improve the condition of man. Commercial television has communicated knowledge of our social problems but the role of non-commercial media is to help to solve these problems. Educational broadcasting is not widely used by community service agencies because countrywide coverage is not provided and there are many barriers to its use created by the way it is organized, regulated, and operated. If the educational broadcasting system could provide valuable service toward improvement of society, substantial funding could be channeled into it. At present, there is spotty coverage and a mixed set of purposes--we have only one state with a statewide radio network, yet this could be of invaluable assistance to community services, especially through sub-channels to special receivers. A better understanding of telecommunications is essential for state and local administrators of health, education, and community programs. (This article appeared in the NAEB Journal, published bi-monthly by the National Association of Educational Broadcasters, Urbana, Illinois 61803.) (eb)

17. AC 000 503

National Association of Educational Broadcasters. SUPPLEMENTAL COMMENTS OF THE NATIONAL ASSOCIATION OF EDUCATIONAL BROADCASTERS, BEFORE THE FEDERAL COMMUNICATIONS COMMISSION (Docket 16495) (IN NAEB Journal, 26(1)/35-50, Jan-Feb 1967.) National Association of Educational Broadcasters, Washington, D. C. 1967. 18p.

ABSTRACT: In testimony before the Federal Communications Commission on establishment of domestic noncommon carrier communication satellite facilities by nongovernmental entities, the National Association of Educational Broadcasters urged creation of a nationwide, nonprofit "second service" serving as an alternative to the major commercial networks. As proposed by the Ford Foundation, this broadcasting service would encompass educational television (ETV) operations, together with other forms of telecommunication capable of making available accumulated data and knowledge, wherever located, either for instantaneous use or for storage and retrieval. Strong local stations and strong state and regional ground-based networks would be essential to the system. This satellite-aided system would greatly reduce costs and revolutionize all forms of educational broadcasting and information exchange, including ETV video tape dissemination and public school instruction. Document includes statistics on existing and anticipated ETV stations in the United States and a summary of their projected (1966-71) operating and capital needs. (The NAEB Journal is published bi-monthly by the National Association of Educational Broadcasters, Urbana, Illinois.) (ly)

18. AC 001 187

Wiltshire, Harold and Fred Bayliss. TEACHING THROUGH TELEVISION. National Institute of Adult Education, London (England). Nottingham University, Department of Adult Education. 1965. 34p.

ABSTRACT: A course on economics was given in the Midlands (England) in 1964, based on a series of 13 twenty-minute television programs. A handbook (a combination of textbook and workbook), postal contact, and two personal contacts with a tutor were available for an enrollment fee of ten shillings. Of the 1,656 persons who enrolled for the correspondence course, 1,347 were individuals who enrolled

voluntarily and worked at home. If the scale of the course enlarged, the cost would equal that of normal class teaching. Some problems were encountered in attempting to teach economic theory, one of which was a lack of funds for more animated presentations. The exercises (a series of objective questions and three essay-type questions) sent in completed by the student and returned corrected with the tutor's comments were in the pivot of the course because it was the effort which students put into them which transformed the viewing of the programs and the reading of the handbook into a process of education. (Three appendixes list the groups using the course, the visiting experts who took part in the television programs, and a map of the area served by the programs.) (sg)

19. AC 000 242

Rowntree, Jean. TEACHING LANGUAGES BY RADIO (IN ON TEACHING FOREIGN LANGUAGES TO ADULTS. Ed. by John and Margaret Lowe. London, Pergamon, 1965/ 53-68.)

ABSTRACT: The post-war (1954) language teaching programs by the BBC began with broadcast as part of the Home Service (general listening) program. In 1959 all language programs were transferred to a third network and the first beginners series was broadcast, a revolution in language teaching by radio. The audience was composed of second language beginners, and people who had missed a grammar school education. The seriousness of the audiences' intent varied with time of program, missed lessons and inability to catch up, other demands on time, amounts of homework, and listening purpose. The method of teaching language by radio involved the efficient use of the human voice and silence. Building aural memory through correct pacing of material was the goal. Other factors to consider when teaching by radio are the lack of "live" teacher, optional textbook, and length of course. There is a brief discussion of future audio-visual language teaching and loan of tapes to educational organizations. (psg)

20. AC 000 270

Winick, Charles. HOW PEOPLE PERCEIVE EDUCATIONAL TELEVISION, A STUDY IN COMMUNICATION (IN Journal of Social Psychology, 65/259-267, 1965.) 1965. 9p.

21. AC 000 285

Hickel, Raymond and W. Horsfall Carter. MODERN LANGUAGE TEACHING BY TELEVISION, A SURVEY BASED ON THE PRINCIPAL EXPERIMENTS CARRIED OUT IN WESTERN EUROPE (Education in Europe, Section 4, General, No. 4) Tr. Council of Europe, Strasbourg. Council for Cultural Cooperation. 1965. 187p.

ABSTRACT: A review of the present situation in modern language teaching in the more general context of pedagogies and adult education, and of the use of television as a medium of instruction in the 19 countries of the Council of Cultural Cooperation. (pg)

22. AC 001 013

Brandeis University Morse Communication Research Center. ONE WEEK OF EDUCATIONAL TELEVISION, Number Four, Apr 17-23, 1966. National Center for School and College Television. 1966. 101p.

ABSTRACT: This report, the fourth since 1961, covers one week of programming by 115 educational television (ETV) stations licensed in April, 1966 and presents a measurement of their output. The main body of the report is devoted to an analysis of programming for three separate audiences served by ETV--the school audience, the college-adult instruction audience, and the general audience. Under each category the amount and time pattern of broadcasting, the sources (local and outside) of programs, subjects broadcast, repeats, and live or taped transmission are reported. Information is also included on the stations themselves, a summary of findings related to changing patterns in ETV, and the methodology of the report. Detailed tables and charts are included. While the number of hours broadcast remained stable for the college-adult instruction audience, programs decreased from 14 percent of total broadcast hours in 1964 to 9 percent in 1966. Nearly half of the hours in this category could be viewed for credit, and about one quarter were broadcast into college classrooms. Programs for continuing professional education, especially for physicians, lawyers, and engineers, and for vocational training were on the rise. Programs for teachers accounted for one quarter of programming. (ja)

23. ED 010 545

Miller, Harry L. PATTERNS OF EDUCATIONAL USE OF A TELEVISED PUBLIC AFFAIRS PROGRAM, A STUDY OF "METROPOLIS, CREATOR OR DESTROYER?" New York University, New York. 1966 OE-5-16-039 EDRS PRICE MF-$1.00, HC-$8.00. 198p.

ABSTRACT: In the spring of 1964, 80 educational television stations in the United States and Canada ran a series of eight films on modern urban life entitled "Metropolis, Creator or Destroyer?" The films, a book of readings, and a Viewer's Guide, planned and coordinated by a group of cooperating universities acting on a national level, were the focus of a vigorous local educational program. In section I of this study, the development of the program, the readings, and the utilization plans are discussed. Section II is a synopsis of the educational use of the Metropolis package. Section III is a detailed account of the liveliest program, that of the Portland Center of the Oregon State System of Higher Education. In Section IV the basic patterns of use (studio panels, additional studio programming, community involvement, selective community involvement), reactions to the materials, and the impact of the program on community action are described. Section V contains conclusions and recommendations. Appendixes include the University Council's members and committees, Viewer's Guide, the Table of Contents of the readings, and a list of NET stations which broadcast the films. (aj)

24. AC 000 978

Sim, R. Alex. A RADIO FORUM PROJECT FOR THE CANADIAN NORTH. A report to the Indian-Eskimo Association of Canada on the feasibility of initiating a radio listening group project in the Canadian North in cooperation with the CBC and other governmental and non-governmental agencies. Indian-Eskimo Association of Canada, Toronto. Canada Centennial Commission, sponsor. 1965. 64p.

ABSTRACT: In the summer of 1965, a feasibility study was made of a radio listening group program in the Canadian North. Facilities at present are inadequate. People are separated not only by distance, but by type of settlement, ethnic differences, and socioeconomic classes. A 2-year experimental project is proposed, to be named "Nunaliit" (the place where people come to talk, make decisions, and act).

The first-year program would concentrate on oral transmission only and would provide a multilanguage project (Eskimo, Loncheux, and English) at Inuvik in Western Arctic, where CBC has radio facilities, and a unilanguage project (Eskimo) from East or Central Arctic. Production teams would travel about the country taping discussions with local leaders on issues important to them. the 4-6 week programs would be given on Monday evenings at 7:30 during the winter of 1966. During the second year, 1967, visual materials, such as films and filmstrips, would be added. About 13 people would be necessary for the program. These would include a few with language facility but lack of experience in broadcasting. It is hoped a partnership can be worked out among the CBC and IEA, responsible for broadcasting and organization of the groups, financial support from government and other agencies, and the participants themselves, who should take increasing responsibility. Appendixes include CBC service in the North and a typical Eskimo newscast. (eb) (Available from Indian-Eskimo Association of Canada, Toronto, at $1.50.)

25. AC 000 749

Ohliger, John F. THE LISTENING GROUP IN ADULT EDUCATION (Ed.D. thesis.) California University (Los Angeles). 1966. 311p. University Microfilms #6612849.

__ABSTRACT__: This thesis examines listening group projects in over 30 countries in the past 45 years. The historical study and the review of research are broken down into the elements of--purposes and outcomes of projects, clientele, broadcasts and supplemental printed materials, methods of grou+ organization, methods of postbroadcast discussions, group leadership, and feedback. Direct and related research is evaluated in regard to the conclusion that such groups can spread the learning of factual material, promote the development of desired attitudes, increase interest in public affairs, affect motivation toward group and individual action, and contribute to more direct democracy. Other research findings point to the tentative conclusions that (1) projects need a substantial staff of field organizers, and (2) listening groups attract clientele of lower educational and economic attainment than the typical participant in adult education. Special emphasis is placed on early efforts of the

British Broadcasting Corporation, America's Town Meeting of the Air, Canada's National Farm Radio Forum, and the many projects of UNESCO in underdeveloped areas. (eb)

26. Rovan, Joseph. TELEVISION IN THE SERVICE OF ADULT EDUCATION (IN TELEVISION AND ADULT EDUCATION, No. 1. Jul 1960/3-10.)

27. A BELGIAN EXPERIMENT: TRAINING COURSES FOR LEADERS OF TELECLUBS IN BELGIUM (IN TELEVISION AND ADULT EDUCATION, No. 1. Jul 1960/19.)

28. WHAT IS BEING DONE IN GERMANY (IN TELEVISION AND ADULT EDUCATION, No. 1. Jul 1960/21.)

29. Cassirer, Henry R. A WIDE HORIZON (IN TELEVISION AND ADULT EDUCATION, No. 2. Nov 1960/1-2.)

30. Greene, Peter Friese. TELEVISION: A STUDY FOR OBSERVATION IN HUMAN RELATIONSHIP (IN TELEVISION AND ADULT EDUCATION, No. 2. Nov 1960/11-13.)

31. Rovan, Joseph. TELEVISION IN PEOPLE'S UNIVERSITIES (IN TELEVISION AND ADULT EDUCATION, No. 2. Nov 1960/14-17.)

32. British Broadcasting Corporation. EDUCATION IN BROADCASTING (IN TELEVISION AND ADULT EDUCATION, No. 3. Apr 1961/5-9.)

33. Standing Conference on Television Viewing. MEMORANDUM TO THE PILKINGTON COMMITTEE (IN TELEVISION AND ADULT EDUCATION, No. 3. Apr 1961/10-18.)

34. Central Committee of the Communist Party of the U.S.S.R. BROADCASTING IMPROVEMENTS AND DEVELOPMENT OF TELEVISION IN THE U.S.S.R. (IN TELEVISION AND ADULT EDUCATION, No. 3. Apr 1961/23-28.)

35. Tarroni, Evelina. A PROGRAM ON THE STRUGGLE AGAINST ILLITERACY (IN TELEVISION AND ADULT EDUCATION, No. 4. Aug 1961/3-8.)

36. Hitzig, Ulrich. FORUM 1961 (IN TELEVISION AND ADULT EDUCATION, No. 4. Aug 1961/11-12.)

37. Shipp, G. AN EXPERIMENT IN ADULT EDUCATIONAL TELEVISION (IN TELEVISION AND ADULT EDUCATION, No. 4. Aug 1961/13-15.)

38. Ahtik, V. THE ROLE OF TELEVISION IN THE CULTURAL CLUBS IN SLOVENIA (IN TELEVISION AND ADULT EDUCATION, No. 4. Aug 1961/19-23.)

39. Dieuzeide, Henri. SOME REMARKS ON EDUCATIONAL TELEVISION AND ITS ORGANIZATION (IN TELEVISION AND ADULT EDUCATION, No. 4. Aug 1961/37-39.)

40. Hudson, Robert B. and Henry C. Alter. TELEVISION IN THE COMMUNITY OF EDUCATION (IN TELEVISION AND ADULT EDUCATION, Nos. 5 & 6. Jan 1962/1-4.)

41. Zilk, Helmut. TELEVISION EDUCATIONAL WORK (IN TELEVISION AND ADULT EDUCATION, Nos. 5 & 6. Jan 1962/10-11.)

42. Bindslov, L. ADULT EDUCATION BROADCASTS (IN TELEVISION AND ADULT EDUCATION, Nos. 5 & 6. Jan 1962/14-16.)

43. AC 000 156

Inquai, Solomon. THE APPLICATION OF RADIO IN COMMUNITY EDUCATION IN ETHIOPIA (Ph.D. dissertation) 1964. 143p.

ABSTRACT: In this study the use of radio in adult education is examined and its application in Ethiopia is proposed. Adult education programs in the United States, Canada, Brazil, Colombia, and India were studied. Questions answered include--(1) How is radio used in adult education, (2) What are its effects and limitations, and (3) Can Ethiopia learn from the experience of these countries? (aj)

44. Shevlin, Alexander. OPERATION ALPHABET - A PHILADELPHIA EXPERIMENT IN INSTRUCTIONAL TELEVISION (IN TELEVISION AND ADULT EDUCATION, Nos. 5 & 6. Jan 1962/27-31)

45. Standing Conference on Television Viewing. THE ANNUAL MEETING (IN TELEVISION AND ADULT EDUCATION, Nos. 5 & 6. Jan 1962/55-59.)

46. Breitenfeld, Frederick, Jr. THE COMMITMENT OF EDUCATIONAL TELEVISION TO A FREE SOCIETY (IN TELEVISION AND ADULT EDUCATION, No. 7. Jul 1962/1-5.)

47. University of Georgia Center for Continuing Education. PROGRAM OF GENERAL CULTURE STUDIES FOR ADULTS (IN TELEVISION AND ADULT EDUCATION, No. 8. Oct.1962/17-18.)

48. ADULT EDUCATION ON INDEPENDENT TELEVISION (IN TELEVISION AND ADULT EDUCATION, No. 9. Mar 1963/1.)

49. Sandor, Gyorgy. CULTURAL CENTERS AND TELEVISION (IN TELEVISION AND ADULT EDUCATION, No. 9. Mar 1963/3-9.)

50. Koblewska-Wroblowa, Janina and Ryszard Koniczek. YOUTH FILM AND TELEVISION CLUBS IN POLAND (IN TELEVISION AND ADULT EDUCATION, No. 9. Mar 1963/10-23.)

51. American Foundation for Continuing Education. SCIENCE FOR THE CONCERNED CITIZEN (IN TELEVISION AND ADULT EDUCATION, No. 10. Jul 1963/20-21.)

52. Martin, Peter. EDUCATIONAL TELEVISION ACROSS CANADA (IN TELEVISION AND ADULT EDUCATION, No. 10. Jul 1963/22-25.)

53. Duhourq, Carlos.Alberto. TECHNICAL SCHOOL TELEVISION IN ARGENTINA (IN TELEVISION AND ADULT EDUCATION; No. 13. May 1964/7-10.)

54. Rovan, Joseph. TELEVISION AND SOCIETY (IN TELEVISION AND ADULT EDUCATION, No. 15. Oct 1964/1-6.)

55. Michalec, Zdenek. TELEVISION AND ADULT EDUCATION (IN TELEVISION AND ADULT EDUCATION, No. 15. Oct 1964/7-8.)

56. Rovan, Joseph. THE THIRD PROGRAM OF THE BAVARIAN TELEVISION (IN TELEVISION AND ADULT EDUCATION, No. 16. Jan 1965/1-4.)

57. Souza, Alfredina de Paiva e. EDUCATIONAL TELEVISION: A BRAZILIAN EXPERIMENT (IN TELEVISION AND ADULT EDUCATION, No. 16. Jan 1965/17-21.)

58. Puglisi, Dr. ADULT EDUCATION ON ITALIAN TELEVISION (IN TELEVISION AND ADULT EDUCATION, No. 16. Jan 1965/42-47.)

59. AC 000 436

Brickman, William W. and Stanley Lehrer. AUTOMATION, EDUCATION, AND HUMAN VALUES. 1966. 419p.

ABSTRACT: This collection of papers was made from those presented at two conferences (1963 and 1964) at the Center for Continuing Liberal Education at The Pennsylvania State University. The aim of the conferences was to provide regional and national stimulus to sustained study about the impact and implications of exponential technological change. The chapters are arranged in four main groupings. The first group is brought together with reference to time point of view--Outlook, the second focuses upon the Humanities, the third upon Education comprehensively considered, the fourth upon Man, Mind and Soul. The document is published by School and Society Books, New York. (eb)

60. ED 012 887

Stanford University Institute for Communication Research. EDUCATIONAL TELEVISION, THE NEXT TEN YEARS. Stanford University, California. Institute for Communication Research. OE-34036 U. S. Office of Education, Washington. Bull-1964-12. 1965. EDRS PRICE MF-$1.50, HC-$15.96. 399p.

ABSTRACT: Four studies of educational television were commissioned by the U. S. Office of Education. The first, contracted to the National Association of Educational Broadcasters, surveyed plans of educational institutions, estimated needs for channel allocations for these plans, and made engineering studies of how to meet these needs. The second study, made by the University of Nebraska, surveyed needs and plans of educational institutions for exchange of teaching materials and recommended ways of meeting these needs. The third, contracted to the Institute for Communications Research at Stanford University, studied problems of finance, program quality, manpower training, and design and equipment of schools. The fourth study, made by National Educational Television, studied audiences of eight educational television stations in six different situations in the United States. This study was summarized in an appendix and the results were to be published separately. (Changes which had occurred since the first publication of this document-1962-were noted in the foreword. Also included were the recommendations of the Television Advisory Panel of the Office of Education. Appendixes include brief histories of both educational television and educational radio.) (This document is available, for $1.25, from U. S. Government Printing Office, Washington, D. C. 20402.) (sg)

61. AC 001 119

Limbacher, James L. USING FILMS, A HANDBOOK FOR THE PROGRAM PLANNER. 1967. 137p.

ABSTRACT: This handbook for program planners has chapters on every type of film use, written by people active in the film field in their own communities--program planning, film evaluation, presentation and promotion, films in small towns, in public libraries, in museums, used for discussion groups, community and college film societies, school, church, and home film programs, film festivals, and films used with young people. Major film organizations are described and there is an annotated bibliography of publications and periodicals dealing with films, a selected list of sources of free films, and major film libraries for rental and purchase. (This document is available from Educational Film Library Association, Inc., 250 West 57th Street, New York City 10019, for $3.50.) (aj)

62. AC 001 001

Rosen, Earl. Ed. EDUCATIONAL TELEVISION, CANADA, THE DEVELOPMENT AND STATE OF ETV, 1966. 1967. 108p. Abstract filed.)

ABSTRACT: A national survey outlines objectives, issues, and specific projects and developments in public school broadcasting, teacher education, higher education, and service to adults and to the general community. Includes a chapter on ETV and adults by Alan M. Thomas. (ly)

63. AC 000 766

Hanna, Ian. Ed. LANGUAGE TEACHING FOR ADULT EDUCATION, PAPERS FROM THE WORKSHOP FOR ADULT EDUCATION LANGUAGE TUTORS. Australian Association of Adult Education, Melbourne. Council of Adult Education, Victoria (Australia). Monash University, Melbourne (Australia). Jun 1965. 67p.

ABSTRACT: These papers are concerned with the practical applications of modern language teaching methods to teaching adult education students. Considerable attention has been given to the use of readily available visual and textual materials, and of standard equipment, tape recorders, gramophones and projectors. (aj)

64. AC 000 832

National Extension College. UNIVERSITY INTERCOMMUNICATION, THE NINE UNIVERSITIES RESEARCH PROJECT (Final report by the Research unit of the National Extension College presented to the Inter-University Working Party on Aug 4, 1966.) National Extension College, Cambridge (England). Calouste Gulbenkian Foundation, sponsor. 04 Aug 1966. 95p.

ABSTRACT: One year systematic investigation of ways in which telecommunication might help higher learning institutions by: sharing facilities, pooling research information, better using existing resources, broadening the scope of their teaching through use of inter-university television system. Participating universities: Hull, East Anglia, Essex, Univ. College, London, Cambridge, Leeds, Glasgow, Stratchclyde, Sussex. (Pub. by Pergamon Press, Oxford.) (gh)

65. AC 000 199

Welch, John M. and Coolie Verner. A STUDY OF TWO METHODS FOR THE DIFFUSION OF KNOWLEDGE (Reprinted from Adult education, 12(4)/231-237, Sum 1962.) Welch, John M. and Verner, Coolie. 1962. 7p.

ABSTRACT: This study examined the relative effectiveness of two processes for the diffusion of knowledge (adult education group method and communication [news bulletin] by using changes in behavior expressed through the adoption of recommended practices as an indication of the degree of learning achieved. There are references.

66. AC 000 220

Robinson, John. EXPLORING THE RANGE OF ADULT INTERESTS (IN PROGRESS IN LIBRARY SCIENCE, 1965, ed. by Robert L. Collison. London, 1965, pp. 179-194). 1965. 16p.

ABSTRACT: A survey of adult interests by BBC Educational Broadcasting in 1964 revealed that most interests do not arise from academic or intellectual curiosity but from the personal, practical needs of everyday life. Home and family interests are most prevalent, followed by vocational and working interests, and other social interests such as music, dramatics, and local history. (eb)

67. Foreign Policy Association. HOW TO PLAN A WORLD AFFAIRS PROGRAM, A GUIDE TO IDEAS, TECHNIQUES, MATERIALS (Special feature IN Intercom, your guide to the world affairs field 9(2)/2-53, 71-72, Mar-Apr 1967). 57p.

ABSTRACT: Addressed to program planners, this issue outlines both topics and formats, ranging from discussion groups and lectures to organizing a community for action in world affairs. Substantial bibliographies list publications on how to organize various types of programs and materials on particular program topics. Film sources, sources of speakers, and organizations participating in world affairs are listed and some are described. (ja)

68. Siemens, Rodney. PARTICIPATION IN A TELEVISION COURSE ON FARM ACCOUNTING (Master's thesis). Siemens, Rodney. Colorado State University, Fort Collins. Aug 1966. 87p. pp. 48-49.

ABSTRACT: To determine the effects of participation in a Manitoba, Canada, television course on farm accounting, a questionnaire was devised on age, educational level, size and type of farm, contact with the Manitoba Extension Service, evaluation of the course and written materials, adoption of farm management practices, knowledge of farm management, and participation in the course. Subjects were 60 farmers who had taken the course, and 79 others who had only purchased the written materials. (Measurement of participation was based on the number of programs viewed and question sheets submitted for correction.) Scores on the knowledge test, adoption of new practices, and course evaluations were strongly related to participation. General farmers participated more than specialized farmers. Participation of wives was strongly related to knowledge scores, increased adoption of new practices and course evaluations. Farmers who had previously adopted few practices adopted more after taking the course. There was no statistical relationship between participation and age, education, size of farm, and contact with the Extension Service, between knowledge of practices and adoption of new practices, or between educational level and rating of the written materials. (author/ly)

69. AC 001 152

North Carolina Department of Public Instruction. FERTILIZER AND LIME, SPECIAL TV COURSE, ADULT EDUCATION. North Carolina, Department of Public Instruction, Agricultural Education Section. 1967. 118p.

70. AC 000 787

Parker, James F., Jr., and Judith E. Downs. SELECTION OF TRAINING MEDIA. Wright-Patterson Air Force Base, Ohio. Aeronautical Syst. Division, Matrix Corp, Arlington. Psychological Research Associates. U. S. Department of Commerce, Washington. Office of Technical Services. Sep 1961. 110p.

ABSTRACT: This report is designed to assist a training analyst faced with the problem of selecting specific training aids and devices to be used in support of the development of the personnel subsystem of a military system. The translation of statements of desired personnel performance and capabilities, as presented in Qualitative and Quantitative Personnel Requirements Information and task analysis documents, into training objectives is discussed. The effectiveness of various training media in meeting specific training objectives indicated and justified in terms of objective evidence. An example is presented illustrating the manner in which training media are selected in support of a typical Air Force operator position.

71. AC 000 922

IS SATELLITE ACT AMBIGUOUS? (Repring from Broadcasting, 71/66-73, Aug 8, 1966). Aug 1966. 8p.

ABSTRACT: Opinion on a domestic satellite communications system by Comsat, Ford Foundation, television networkds, and ETV are reported briefly. (sg)

72. AC 000 161

Howard, Berthamae. AN EVALUATION STUDY OF THE MACON COUNTY EXTENSION HOME ECONOMICS PROGRAM, SUMMARY (University of Missouri Problem 400). Howard, Berthamae. Missouri University, Columbia. 1964. 10p.

ABSTRACT: A telephone survey indicated that women participating in Extension Home Economics programs preferred to receive information about programs through the mass media and wanted special interests meetings such as sewing and flower arranging.

73. AC 000 162

Evans, Helen H. FIFTEEN YEARS OF ADVICE TO PARENTS OF YOUNG CHILDREN IN SELECTED NEWSPAPERS AND MAGAZINES, 1946-1960 (Summary of M.A. Thesis). Evans, Helen H. Ohio State University, Columbus. 1965. 11p.

ABSTRACT: A comparison of the number and quality of articles on child care appearing in magazines and nespapers from 1946-1960 with that appearing from 1921-1945 indicates a slight increase in publication although the total amoung of material presented as advice to parents was still inadequate.

74. AC 000 451

Stoller, Frederick H. THE USE OF FOCUSED FEEDBACK VIA VIDEOTAPE IN SMALL GROUPS (NTL Explorations in human relations training and research, 1). Stoller, Frederick H. National Education Association. National Training Laboratories. 1966. 17p.

ABSTRACT: A major technical problem in psychotherapy and counseling is to provide a client with an objective view of his behavior, goals, and attitudes, and of how these mesh together. The opportunity to see one's self as seen by others can be provided by videotape, a tool with several advantages--it involves the audiovisual channels of information, playback can be immediate or delayed, selectivity, repetition, and stopped action are easy, and tapes can be stored and used again. A spontaneous, natural group session can be conducted before television cameras if the director is attuned to what is significant in the group interaction at the moment, acquainted with television equipment and programming, and knows group processes. Focused feedback, a emthod of using videotape for enhancing small group confrontation, is based on the assumption that the style of communication presented to the world is significant. By focusing on how one communicates, rather than what one communicates, videotape feedback has the potential for strengthening some of the most important phases of an encounter group. (National Training Laboratores, National Education Association, 1201 Sixteenth Street, N.W., Washington, D. C. 20036, $1.50). (aj)

75. AC 000 193

Carter, Roy E., Jr. A FIELD-EXPERIMENTAL STUDY OF THE FUNCTIONS OF EDUCATIONAL TELEVISION FOR ITS AUDIENCES, WITH SPECIAL REFERENCE TO THE POTENTIAL ROLE OF CHILDREN IN STIMULATING FAMILY USE OF THIS MEDIUM--Third Report. Carter, Roy E., Jr. Minnesota University, Minneapolis. Communication Research Division. Jun 1964. OEG-7-33-0400-166.1 36p. fs

ABSTRACT: To discover the extent to which children could be attracted to evening educational television programs and to learn whether the youngsters might interest their parents in viewing the programs, tenth-grade social studies classes were divided into four groups. (1) Discussion was used to stimulate viewing of a public affairs series on the area's educational television station, (2) students received brochures through the mail publicizing the programs, (3) both types of stimulus were combined, and (4) a control situation involved neither stimulus. Dependent variables were the evening educational television viewing habits of children and their parents. The discussion method was successful in increasing the number of EdTV viewers among children, but only while the experiment was in progress. Program interest did not generalize to other educational television broadcasts. There was a statistically significant increase in parents' viewing of the experimental program in response to the combined effort of mailed publicity and children's class experience. (aj)

76. ED 014 014

National University Extension Association. EDUCATIONAL TECHNOLOGY, PREPARATION AND USE IN ADULT BASIC EDUCATION PROGRAMS. National University Extension Association, Washington. U. S. Office of Education, Division of Adult Education. Jun 1967. OEG2-6-061894-1894. EDRS PRICE MF-$0.50, HC-$4.92. 123p.

ABSTRACT: Audiovisual materials, when combined with consideration of the ways people learn, can offer new ways of expressing ideas, presenting information, and making instruction challenging and efficient. This publication, directed at teachers of adult basic education and their administrators, illustrates applications of instructional technology to adult literacy programs. Local production techniques are emphasized and program planners are urged to make full use of professional and paraprofessional services of the community. Sections

include a glossary, plans for training sessions (in-service training, workshops, and institutes), available resources, media used in adult basic education (video and audio tape recorders, programmed instruction, computer-assisted instruction, 8mm motion pictures, film loop and overhead projectors, tele-lecture systems, including Victor Electrowriter Remote Blackboard and Blackboard-by-Wire-System), and classified, annotated bibliographies. (aj)

77. AC 001 676

American Management Association. AMERICAN MANAGEMENT ASSOCIATION CONFERENCE AND EXHIBIT ON EDUCATION AND TRAINING (Third, New York, August 8-11, 1967). American Management Association, New York. 1967. 26p.

ABSTRACT: This summary of the plenary sessions of the American Management Association's Third Annual Conference and Exhibit on Education and Training features discussions of the motivational aspects of the learning process, the social and technological dimensions of educational and instructional television, the current role of audiovisual devices in learning, the present state of educational "hardware" and "software", the measurement of educational effectiveness, trends in tests and testing, and means of assessing public school education in America. Addresses on public universities in America, the financing of education in urban areas, and useful areas of partnership between education and industry in promoting computer assisted instruction are included. (This document is available from the American Management Association, 135 West 50th Street, New York, New York 10020) (ly)

78. AC 000 750

Erickson, Clifford and Hyman M. Chausow. THE CHICAGO CITY JUNIOR COLLEGE EXPERIMENT IN OFFERING COLLEGE COURSES FOR CREDIT VIA OPEN CIRCUIT TELEVISION, Reports of the three year experiment, 1958, 1959, 1960. Erickson, Clifford G. and Chausow, Hymen M. Chicago City Junior College, Chicago, Illinois. Chicago Public Schools, Chicago, Illinois. Aug 1960. 195p.

ABSTRACT: Year by year description in text and tables of the administration, enrollment, costs, achievement comparisons in controlled experiments, special studies, and for future research. A brochure and press releases are inserted in v.2 and v.3 includes bulletins, faculty applications and assignment mail-in sheets. (aj)

79. AC 000 317

Farm Forum Project Committee. FARM RADIO FORUM IN SASKATCHEWAN, AN EVALUATION OF THE 1956-57 FARM FORUM PROGRAM. Saskatchewan University, Saskatoon. Farm Forum Project Committee. May 1957. 224p.

ABSTRACT: The National Farm Radio Forum, a rural adult education movement, has been contributing to the development of rural people throughout Canada. In response to a need for more information on the Forum in Western Canada, a Committee was designated to evaluate the program in Saskatchewan. Chapters include a description of the Farm Forum Institute, surveys of farm families, organization of Forums, the 1956-57 record of Saskatchewan Forum, membership characteristics, evaluation of the program by the membership, by local Forum organizers, and by provincial leaders, and the Committee's conclusions and recommendations. (ja)

80. UNESCO. MASS MEDIA IN ADULT EDUCATION (Documents of the Prague Seminar, The Contribution of Research to the Use of Audio-Visual Mass Media in Adult Education, Oct 5-10, 1966) (Text in English, French, Russian, Spanish, Czech, and German). Czechoslovakian UNESCO Commission, Prague. International Central Inst. for Youth and Educational Television. 2 Aug 1967. 105p.

ABSTRACT: This international seminar, organized by the Central Committee of the Czechoslovakian Trade Union of Educational and Cultural Workers and supported by UNESCO and the Czechoslovakian UNESCO Commission, brought together 118 specialists in mass media from 14 countries. The aims of the seminar were to accelerate work relating to contributions of research to the use of audiovisual mass media in adult education, to initiate interdisciplinary exchange in such areas as techniques and methodology, and to further the cooperation of organizations and the coordination of their efforts in this field. Seminar reports, accompanied by commentary, dealt with primary research problems, the state of the art of mass media adult education, evaluation criteria, and aspects of viewer research. The work groups discussed radio, television, films, and possibilities for further research. Conclusions and suggestions were given concerning research and training needs, publications, information exchange, and cooperative program planning through UNESCO. (The Document is in English, French, Spanish, Russian, Czech, and German, and includes a list of participating Czechoslovakian organizations, and rosters of delegates. It is available from the Czechoslovakian UNESCO Commission, Prague, 105 pages) (ly)

81. AC 001 520

Adams, Charles F. TRAINING TYPISTS IN THE INDUSTRIAL ENVIRONMENT, PRELIMINARY REPORT OF A PROTOTYPE SYSTEM OF SIMULTANEOUS, MULTILEVEL, MULTIPHASIC AUDIO PROGRAMMING, Adams, Charles F. National Association of Manufacturers, New York. MIND Monograph, 1 May 1966. 22p.

ABSTRACT: In 1965 ten Negro and Puerto Rican girls began clerical training in the National Association of Manufacturers (NAM) Typing Laboratory I (TEELAB-I), a pilot project to develop a system of training typists within the industrial environment. The initial system, and adaptation of Gregg audio materials to a machine technology, taught accuracy, speed building, job simulation, filing, spelling, and production work. TEELAB-I took the novice to over 40 words per minute in eight weeks and could be administered by any typist. Based on a ten-student class, the cost per trainee was $8.00 per week for leasing the equipment, typewriter rental, books, supplies, and administration time. In 1966, a tape-based system with a four-channel simultaneous playback of typing instruction on four skill levels was designed for use in TEELABS II and III, capable of FM radio broadcasts in which simultaneous four-channel transmissions could be made on sub-carriers while the station carried its regular program schedule. Such techniques could lead to cost reductions by making training available to large numbers of trainees. (This document is available from the National Association of Manufacturers, 277 Park Avenue, New York City 10017) (aj)

82. AC 001 475

Luke, Robert A. LITERACY THROUGH TELEVISION (IN Audiovisual instruction 11(4)/260-262, Apr 1966). Luke, Robert A. Apr 1966. 3p.

ABSTRACT: In this article televised adult basic education programs in several cities are reviewed.

83. ED 013 418

Gladmon, William T. A REPORT TO THE HOUSE INTERSTATE AND FOREIGN COMMERCE COMMITTEE ON EDUCATIONAL TELEVISION LEGISLATION. Gladmon, William T. Jul 1967. EDRS PRICE MF-$0.25, HC-$0.56. 14p.

ABSTRACT: Educational television stations WQEX and WQED, in Pittsburgh, have been providing specialized adult education courses for managers and supervisors in business and for physicians and nurses. Other educational television stations throughout the country are active, not only in these areas, but also in fire and police training, and in providing credit and noncredit courses at the college and professional levels. Televised courses have greatly improved access to top-level instruction. They encourage company-sponsored training, save time and money, make the community more training-minded, and stimulate active discussion and the exchange of group or departmental ideas. (ly)

84. AC 001 236

Bartlett, Alton C. CHANGING BEHAVIOR THROUGH SIMULATION, AN ALTERNATE DESIGN TO T-GROUP TRAINING (IN Training and development journal, 21(8)/38-52, Aug 1967. Bartlett, Alton C. Aug 1967. 17p.

ABSTRACT: A program to improve the interpersonal competence of corporation managers intended to avoid the problems of the T-group approach, is described in detail. To improve communication between individuals, two techniques which provide the best simulation are used--the case method and role playing. The importance of feedback is stressed. (aj)

85. AC 001 052

Wedemeyer, Charles A. and Gayle B. Childs. NEW PERSPECTIVES IN UNIVERSITY CORRESPONDENCE STUDY. Wedemeyer, Charles A. and Gayle B. Childs. Center for the Study of Liberal Education for Adults, Chicago. 1961. 78p. Tables. Footnotes.

ABSTRACT: Several million Americans are served by academic, private, and military correspondence programs, many of which employ group methods and mass media (radio, television, films). Correspondence programs can be adjusted to any background or level of ability, provide varied subject matter, permit study at any time or place, and meet academic and other needs through courses for college preparation or reinstatement, enrichment courses and similar advanced study, technical and professional education, and use with conferences and institutes. Group correspondence study in its several forms is conducive to economy, active discussion, student motivation, and immediate verbal practices, although special study guides, instructor orientation, and enrollment methods are usually required. Traditional correspondence methods have been combined by several universities in recent years with audiovisual media to provide explication and pacing and to improve motivation. Expanded provisions for secondary and higher education, topical courses, and liberal and humanistic studies are predicted, together with wider cooperation and international programs. Document includes tables (results of two evaluative surveys, and examples of TV-correspondence courses). (author/ly)

86. ED 012 412

Edstroem, Lars-Olof. CORRESPONDENCE INSTRUCTION IN ETHIOPIA, KENYA, TANZANIA, MALAWI, ZAMBIA, AND UGANDA. EXPERIENCES, NEEDS, AND INTEREST (Report to the Dag Hammarskjoeld Foundation.) Edstroem, Lars-Olof. Dag Hammarskjoeld Foundation, Stockholm (Sweden). 1966. EDRS PRICE MF-$0.75, HC-$5.60. 140p.

ABSTRACT: This report on the salient features and concerns of correspondence instruction in Ethiopia, Kenya, Tanzania, Malawi, Zambia, and Uganda, discusses advantages, disadvantages, and requirements of the correspondence method in an African context, surveys conditions and facilities (postal services, roads, instructional radio and television, correspondence schools and colleges, resources for producing instructional materials), suggests national tasks for correspondence teaching, and assesses interest in the proposed 1967 correspondence instruction seminar. Teacher training and upgrading, preparation of correspondence educators, mass education of unemployed primary school dropouts, inservice medical training (for example, for the Ethio-Swedish Pediatric Clinic), improvement of teaching methods by combining correspondence courses with classroom settings, and inculcation of study skills and habits for lifelong learning, are discussed as a part of the urgent manpower training needs throughout Africa. Problems and issues such as language (as in

Ethiopia and Malawi) and governmental versus private courses, major organizations such as the Correspondence Course Unit (Zambia Ministry of Education), outstanding efforts such as the Malawi Correspondence College Radio Classroom, and recommendations on participation in the seminar, are stressed. Appendixes on operating expenses and program planning are included. (ly)

87. ED 010 861

Spencer, O. F. and Elizabeth Powell. CORRESPONDENCE STUDY. SURVEY QUESTIONNAIRE AND SUMMARY OF REPLIES (Title supplied). Spencer, O. F. and Elizabeth Powell. NUEA. Correspondence Study Division. Syllabi Study Committee. Apr 1966. EDRS PRICE MF-$0.25, HC-$0.32. 8p. Tables.

ABSTRACT: The Syllabi Study Committee of the Correspondence Study Division of the National University Extension Association is studying the possibility of a central repository for syllabi used in correspondence study, in instructional television, and/or perhaps in other forms of independent study off-campus. This questionnaire was sent to 62 member institutions, asking for information on such courses at the college credit level, college non credit level, high school, and other levels, It also asks for the institutional attitude toward a central repository of these materials, policy concerning the production, use, and sale of syllabi, and the use of syllabi produced by other institutions. Data gathered from the 53 returned replies are tabulated but no conclusions are drawn from them. (eb)

88. ED 012 859

Rutgers Labor Education Center. PROGRAM TO TRAIN TRADE UNIONISTS AND CAP STAFF WORKERS AS COMMUNITY ACTION TRAINERS, CURRICULUM AND SCHEDULE. Industrial Union Council, AFL-CIO. New Jersey Community Action Training Institute. Rutgers. The State University Labor Education Center. 1967. EDRS PRICE MF-$0.25, HC-$1.36. 34p.

ABSTRACT: Objectives of the ten-day residential training program held in June 1967 were--to understand the role of the trainer, to develop skills and knowledge in working with groups and in implementing community action training programs, to heighten self-awareness, to learn to apply force field analysis to problem solving, to interpret labor's position in social programs, to investigate

anti-poverty legislation and causes of poverty, and to test new methods of training non-professional as trainers. The curriculum was to include group discussion, films, role playing, and analyses of decision making and program evaluation and review techniques. Visits to manpower projects were planned, and sessions on research techniques and resources, on the nature of state governments' political and economic power, and on the role of labor in improving urban housing and education and in civil rights. Participants were to evaluate the training program. As a final exercise each participant would organize the project he planned to implement within his community. The residential phase of the program was to be followed by bi-weekly, structured, all-day seminars in which field project experiences would be reviewed. (aj)

89. ED 012 882

Verner, Coolie and Peter M. Gubbels. THE ADOPTION OF REJECTION OF INNOVATIONS BY DAIRY FARM OPERATORS IN THE LOWER FRASER VALLEY (Publication, 11). Verner, Coolie and Peter M. Gubbels. Canada. Agricultural Economics Research Council, Ottawa. Jun 1967. EDRS PRICE MF-$0.50, HC-$3.64. 91p.

ABSTRACT: Socioeconomic characteristics, responses to innovations, and use of information sources were correlated for 100 randomly chosen dairy farmers in the lower Fraser Valley of British Columbia. Ten dairying innovations were divided into two groups according to complexity. Adoption scores were used to classify the farmers and stages of adoption (awareness, interest, evaluation, trial, adoption). Characteristics positively related to adoption were active information seeking, social participation, higher income, and large herds of young stock. Characteristics negatively related included long dairying experience, large families, and long tenure on the present farm. Awareness came largely by mass media, but personal contacts were dominant at later stages of adoption. On the less complex innovations, unawareness and discontinuation were higher, while rejection, adoption, and continuation were lower. About half the rejections occurred during awareness. District Agriculturists and farm organizations played a minor role in diffusion and adoption. Provisions for keeping Canadian farmers abreast of desirable innovations were judged inadequate. (The document includes 43 tables and 37 references.) This publication is also available, for $2.00, from the Agricultural Economics Research Council of Canada, Colonel By Drive, Ottawa 1, Canada) (ly)

90. AC 001 246

Zambia University. THE ROLE OF THE UNIVERSITY IN ADULT EDUCATION TRAINING (Report of a conference held at the University of Zambia, Department of Extra-Mural Studies, Dec 14-15, 1966). Zambia University, Lusaka. Department of Extra-Mural Studies. 1966. 100p.

ABSTRACT: Fifty-one representatives of government, the University of Zambia, and industry discussed the role of the University Department of Extra-Mural Studies in the affairs of the country. The consensus of the conference was that the university conduct research, act as an advisor to other agencies, and work with them in developing and evaluating training programs, that a sub-committee of the National Council of Education be formed to coordinate adult education activities, and that training courses be set up for teachers of extension workers, volunteers, prospective teachers, and those working in mass media. Correspondence courses should be backed by radio and residential programs. Subjects offered should include philosophy of adult education, teaching methods, program planning, comparative adult education, economics of development, language problems, and factors affecting adult learning. Other skills could be taught in conjunction with other institutions. Papers read and distributed at the conference, information on training courses in adult education, list of conference participants, and future trends in the department are included. (aj)

91. AC 000 290

Kelman, Herbert C. THE REACTIONS OF PARTICIPANTS IN A FOREIGN SPECIALISTS SEMINAR TO THEIR AMERICAN EXPERIENCE (IN Journal of social issues, 19(3)/ 61-114, Jul 1963). Kelman, Herbert C. Jul 1963. 54p.

ABSTRACT: In 1963, 28 communications specialists from 16 countries spent four months in the United States studying American broadcasting, particularly educational broadcasting. As part of their program, a six-week seminar was held at Brandeis University with three goals--(1) to provide participants with

a professionally useful experience; (2) to open up channels of communication between participants and their American colleagues; and (3) to provide participants with first-hand knowledge of American mass media and American society and life in general. This report is an evaluation of the seminar. (ja)

92. AC 000 489

Payne, John G. VIDEOTAPE RECORDING FOR MANAGEMENT TRAINING, A REPORT FROM WESTERN ELECTRIC ON HOW TO USE TELEVISION. (IN Training and development journal, 21(4)/18-25, Apr 1967). Payne, John G. Apr. 1967. 8p.

ABSTRACT: Although an expensive training tool, television adds a new technique to the trainers' devices for creating learning designs, but it is no replacement for a competent and sensitive trainer. (eb)

93. Ivancevich, John M. and James H. Donnelly. STEPS TOWARD PROFESSIONALIZATION OF TRAINING DIRECTORS. (IN Personnel journal 45(11)/662-667, 695, Dec 1966). Ivancevich, John M. and Donnelly, James H. Dec 1966. 7p.

ABSTRACT: To help the training director to select the most applicable technique to fulfill his needs research on the effectiveness of seven methods is reviewed. The methods are--lecture, conference (discussion), programmed instruction, role playing, sensitivity training, television, and movie films.

94. AC 001 716

Breitenfeld, Frederick, Jr. AN ANALYSIS OF THE ROLE OF PRINCIPAL PHILOSOPHIES OF ADULT EDUCATION IN EDUCATIONAL TELEVISION PROGRAMMING FOR ADULTS (Ph.D. thesis). Breitenfeld, Frederick, Jr. Syracuse University, Syracuse, New York. 1963. 226p.

ABSTRACT: Assuming educational television to be a form of liberal adult education, its programming, present and potential audiences, and the attitudes of various publics toward it were investigated. Two views toward liberal adult education were recognized. The traditionalist argues that content transcends method, that the goal of liberal adult education is individual change, that the audience for continuing education is limited to intellectually curious community leaders, and that the result is an improved community. The modernist contends that--method can be educative in itself, the goal of liberal adult education is often community betterment, the audience for continuing education is the entire populace, and the result is a group of improved individuals. Programming rationale appears to be of the modernist camp, but the design of most programs follows the traditionalist view. Educational television reaches community leaders who are not avid general television fans. The traditionalist considers this right. The modernist argues that educational television should compete with commercial stations for audiences in order to expose those who need it to cultural enrichment. (Document is available from University Microfilms, Ann Arbor, Michigan. Order No. 64-5644. Microfilm $2.95. Xerography $10.35. 226p.) (author/aj)

95. AC 001 713

Houk, Marian Mixon. THE CONTRIBUTIONS OF FOUR NATIONAL ORGANIZATIONS TO THE DEVELOPMENT OF EDUCATIONAL TELEVISION IN THE UNITED STATES (Ed.D. thesis). Houk, Marian M. American University, Washington, D. C. 1963. 343p.

ABSTRACT: The major problem of this study was to analyze the significance of the contributions to the educational television movement in the United States made by the United States Office of Education, the National Association of Educational Broadcasters, the National Education Association, and the Ford Foundation, organizations active in the initiation and development of the educational television movement from 1950 to 1962. Supporting problems studied were the motivations of each organization for participating in the educational television movement, the interrelationships among the organizations, and their future plans for continued activity in the field. (Document is available from University Microfilms, Ann Arbor, Michigan. Order No. 64-2437. Microfilm $4.40. Xerography $15.55. 343p. (author/aj)

96. AC 001 180

Rocklyn, Eugene H. THE APPLICATION OF PROGRAMMED INSTRUCTION TO FOREIGN LANGUAGE AND LITERACY TRAINING. Rocklyn, Eugene H. Paper 8-67. DA44-188-ARO-2. George Washington University, Washington. HumRRO. Feb 1967. 13p.

ABSTRACT: As shown in the programs described, the advantages of programmed foreign language instruction for military personnel lies in eliminating or relieving the need for native or highly trained instructors, and in providing needed practice through repeated opportunities to respond in a favorable learning environment. The first course, designed to help troops gather low level tactical information, used recorder equipment, taped course material, scoring equipment, and printed course material. The programmed course in Vietnamese (largely composed of queries for information, social amenities, advising terms, instructions, and commands) employed a dual-track student tape recorder, earphones, and a student microphone. These programs led to clearly increased proficiency even among relatively less able students. In programmed literacy education, (a comparatively undeveloped area) the Progressive Choice Reading Method and the Diebold Group system, both of which combine programmed instruction with tutorial instruction, have also shown considerable promise. (The document includes 4 references, and a description of the National Clearinghouse for Self-instructional Language Materials.) (This document, AD 647841, is available from the Clearinghouse for Federal Scientific and Technical Information, Springfield, Va. 22151. Microfiche-$0.65, Hardcopy-$3.00). (ly)

97. AC 001 176

Showel, Morris and others. AUTOMATION OF A PORTION OF NON-COMMISSIONED OFFICERS LEADERSHIP PREPARATION TRAINING. Showel, Morris and others. George Washington University, Washington. HumRRO. TR-66-21. U. S. Department of the Army. Office of Research and Development. 2J024701A712 01. DA-44-188-ARO-2. Dec. 1966. 42p.

ABSTRACT: A method of presenting roughly one-seventh of the Army's two-week leader Preparation Course (LPC) through automated instruction was developed. The automated instruction method included the use of tape-recorded lectures, supported by visual aid frames, and programmed workbooks. Automated presentation proved to be at least as effective as conventional instruction in imparting the leadership knowledge covered by automation. In addition, those students who learned through the automated method appeared to retain their knowledge better than the conventionally-trained students. The automated method also exhibited practicality in reduction of instructor requirements, flexibility of scheduling, and consistency of level of presentation. The automated program was adopted for use at Army Training Centers presenting the LPC. (author)

98. AC 001 177

Whitted, J. H., Jr., and others. DEVELOPMENT AND EXPERIMENTAL EVALUATION OF AN AUTOMATED MULTI-MEDIA COURSE ON TRANSISTORS. Whitted, J. H. and others. Aerospace Medical Res. Laboratories. Wright-Patterson AFB, Ohio. AMRL-TR-66-142. RCA Service Company, Camden, N. J. AF-33(615)-2880. Sep 1966. 114p.

ABSTRACT: A study was made of the feasibility of developing a fully automated self-study program for teaching electronic solid state fundamentals and to assess through a controlled experiment the relative effectiveness of the automated course compared to the conventional instructor/classroom presentation and self study materials from the Air Force Extension Institute. Media for the automated course included tape slide audiovisual presentations, programmed text, cued text, sound movie, workbook, and an RCA transistor trainer. Although the classroom subjects received somewhat higher ratio gain scores on the average than the multimedia subjects, this difference was not significant. Both of these modes proved more effective than the extension course materials. Principal measures of effectiveness were a pretest and a posttest made up of multiple-choice items relating to the solid state theory covered. Findings suggest the need for practical, reliable, flexible media and methods, a high degree of student participation, positive reinforcement, and opportunity for review. (This document, AD 646 671, is available from the Clearinghouse for Federal Scientific and Technical Information, Springfield, Va. 22151. MF-$0.65, HC-$3.00.) (author/ly)

99. Boswell, John H. and others. TELE-LECTURE: AN EXPERIMENT IN REMOTE TEACHING. (IN ADULT LEADERSHIP) 16 Mar 1968. pp. 321-322.

100. CONTINUING MEDICAL EDUCATION ON TELEVISION (IN ADULT LEADERSHIP) 16 Mar 1968. p. 336.

101. UNESCO. BOOK DEVELOPMENT IN ASIA. Paris: UNESCO, 1967.

102. Johnson, Eugene I. PUBLIC TELEVISION AND PUBLIC AFFAIRS EDUCATION. Washington: Adult Education Association, 1967.

103. Johnson, Eugene I. THE NEW MEDIA IN PUBLIC AFFAIRS EDUCATION. Washington: Adult Education Association, 1967.

104. Tyler, I. Keith. COMBATING ILLITERACY WITH TELEVISION (IN AV COMMUNICATION REVIEW) 13 (Fall 1965), pp. 309-324.

105. Cunningham, Clarence J. VIDEOTAPE--A TEACHER EDUCATION TOOL FOR ADULT EDUCATORS (IN ADULT LEADERSHIP) 15 Mar 1967. p. 332.

106. UNESCO. NEW EDUCATIONAL MEDIA IN ACTION: CASE STUDIES FOR PLANNERS, Volume 1. Paris: UNESCO, 1967.

107. UNESCO. NEW EDUCATIONAL MEDIA IN ACTION: CASE STUDIES FOR PLANNERS, Volume II. Paris: UNESCO, 1967.

108. UNESCO. NEW EDUCATIONAL MEDIA IN ACTION: CASE STUDIES FOR PLANNERS, Volume III. Paris: UNESCO, 1967.

109. Schramm, Wilbur and others. THE NEW MEDIA: MEMO TO EDUCATIONAL PLANNERS. Paris: UNESCO, 1967.

110. Johnstone, John W. C. and Ramon J. Rivera. VOLUNTEERS FOR LEARNING. Chicago: Aldine Publishing Company, 1965.

111. AC 001 426

Carnegie Commission on Educational Television. PUBLIC TELEVISION, A PROGRAM FOR ACTION. Report and recommendations of the Carnegie Commission on Educational Television. Carnegie Corporation of New York. Jan 1967. 284p.

ABSTRACT: The report of the Carnegie Commission on Educational Television proposes a non-profit corporation for public television to receive and disburse private and government funds. It recommends increased government support of local and national program production, new facilities for live-broadcast interconnection, research and development in programming and production and in television technology, and recruitment and training of specialized talent. There should be additional enabling legislation and financing through excise taxes on television receivers. The existing system (December 1966) is outlined--sponsorship (21 school, 27 state, 35 university, and 41 community stations), sources of general programming, distribution, and financial support. Characteristics of commercial and public television and their audiences are described, and the potentials of educational television discussed. Supplementary papers also discuss legal aspects,

projected long-run operating costs, and the role of the Federal Communications Commission. Financial and operating reports of education television stations, July 1965-June 1966, are presented, together with data on audience sizes and occupational and educational characteristics of listeners. Document includes 35 tables, a map, and list of ETV Stations. (This document is available from Bantam Books, New York, New York 10016) (ly)

112. McMahon, Ernest E. and others. COMMON CONCERNS: THE POSITION OF THE ADULT EDUCATION ASSOCIATION OF THE U. S. A. Washington: Adult Education Association, 1967.

113. Adult Education Association. MASS MEDIA/ADULT EDUCATION. (Newsletter of the Mass Media Section of the Adult Education Association, Issues #1 through #5.)

114. Johnson, Eugene I. EXTENDING THE EDUCATIONAL INFLUENCE OF TELEVISION BROADCASTS. Boston: World Peace Foundation, 1967.

115. ED 011 993

Groombridge, Brian, ed. ADULT EDUCATION AND TELEVISION, A COMPARATIVE STUDY IN CANADA, CZECHOSLOVAKIA, AND JAPAN. Groombridge, Brian, ed. National Institute of Adult Education, London (England). UNESCO, Paris (France). Sep 1966. EDRS PRICE MF-$0.75, HC-$5.68. 142p.

ABSTRACT: Studies on the educational uses and potential of television in Canada, Czechoslovakia, and Japan outline and discuss (1) the social and educational context of ETV in each nation, (2) kinds of programs and their purposes, (3) exploitation of ETV by adults, (4) research on audience characteristics and needs, and (5) forms of cooperation between television broadcasters and adult education. The Canadian report stresses (1) cooperation with universities, educators, and adult education organizations, (2) CBC objectives (e.g., greater understanding between French and English Canadians), (3) program production and scheduling, (4) staff training, (5) the impact of television on the Farm Forum and Citizens Forum series, and (6) research and planning needs. The Czechoslovakia report emphasizes (1) investigation of audience viewing patterns and reactions, (2) effective planning and production and scheduling, and (3) cooperation with other educational bodies in advisory, creative, and staff training activities. The Japanese report seeks to relate adult education and television to social needs through formal and informal courses (correspondence and women's education, etc.), general cultural and informational broadcasting, suitable production methods, and specific leadership training techniques. Case studies on the CBC series "Four Philosophers" (Canada), health education (Czechoslovakia), and women's classes (Japan) are given. Document includes editor's commentary, 4 tables, and 71 references. (National Institute of Adult Education, $4.50) (ly)

116. Ohliger, John. SOCIAL CHANGE THROUGH LISTENING GROUPS. (IN ADULT LEADERSHIP) 16 Jan 1968. pp. 247-250.

117. Knowles, Malcolm S. ed. HANDBOOK OF ADULT EDUCATION IN THE UNITED STATES. Chicago: Adult Education Association, 1960.

118. AC 000 110

Rossi, Peter H. and Bruce J. Biddle, ed. THE NEW MEDIA AND EDUCATION. Garden City, New York: Anchor Books, Doubleday and Company, Inc., 1966. 22p.

ABSTRACT: Audio-visual aids such as the package programs developed by the Fund for Adult Education (1951-1961) have made a great impact on adult education. Television courses have not been popular, perhaps because mass media alone cannot actively involve the learner in the learning process. Mass media have been used with group discussion on local and national levels and a combination of television, correspondence study, and on-campus class meetings has been used successfully for credit courses at several colleges. Other promising innovations are electronic information storage and feedback devices and computerized management games. There are five guiding principles for increasing the educative potential of the newer media--(1) understanding the cultural values of learners, (2) using new media for self-diagnosis of learning needs and evaluation of learning experiences, (3) involving the learner in educational planning, (4) organizing adult learning around problem situations, and (5) using learner's experience in discussions and permitting him to practice what he has learned in simulation exercies. Interaction among learners and between learners and teachers is necessary. (Document includes a summary of National Opinion Research Center (NORC)'s report on participants in adult education (Johnstone, 1963) and possibilities for increasing the impact of the newmr media on adult education.) (aj)

119. ED 014 038

Ohliger, John. LISTENING GROUPS, MASS MEDIA IN ADULT EDUCATION. Ohliger, John. Center for the Study of Liberal Education for Adults, Boston. 1967. EDRS PRICE MF-$0.50, HC-$3.44. 86p.

ABSTRACT: The author examines listening group projects in over 30 countries since the 1920s. The historical study and the review of research deal with purposes and outcomes of projects, clientele, broadcasts and supplemental printed materials, methods of group organization,methods of post-broadcast discussions, group leadership, and feedback. Direct and related research is evaluated in terms of the conclusion that such groups can spread the learning of factual material, help develop desired attitudes, increase interest in public affairs, affect motivation toward group and individual action, and contribute to more direct democracy. Other research findings suggest that projects need a substantial staff of field organizers, and that listening groups attract clientele of lower economic and educational attainment than the typical participant in adult education. Special emphasis is placed on early efforts of the British Broadcasting Corporation, America's Town Meeting of the Air, Canada's National Farm Radio Forum, and the many projects of UNESCO in underdeveloped areas. (This document is a revision and adaptation of a doctoral dissertation presented to the University of California at Los Angeles.) (This document is also available from the Center for the Study of Liberal Education for Adults, 138 Mountfort Street, Brookline, Mass. 02146). (ly)

120. Ohliger, John. WHAT HAPPENED TO THE CANADIAN FARM RADIO FORUM? (IN ADULT EDUCATION) 18 Spring 1968. pp. 176-187.

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